

HOSPITALS UNDER PRESSURE

**HOSPITALS UNDER PRESSURE:
ADMINISTRATIVE RESPONSES TO FISCAL
RESTRAINT BETWEEN 1977 AND 1984**

BY

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ABSTRACT

In this thesis, we examine the administrative responses by Ontario hospitals to fiscal restraint between 1977 and 1984. Using the conceptual 'model' of organizational change developed in James Thompson's Organizations in Action [1967], we predict that the most significant adaptations occurred in hospitals' administrative components, while "core" activities such as medical procedures remained relatively inflexible. More importantly, the observed changes in administrative tasks and activities can be accounted for by the role played by administrators in maintaining internal order and dealing with external contingencies. Accordingly, the greatest adaptations will be in how the administrative component assesses the performance of "core" activities and communicates this to an external funding agency (i.e. Ministry of Health).

We find that the empirical data collected is consistent with our predictions. As a result, we conclude that hospital adaptation during this time period was explicitly related to renewing the political conditions necessary for

organizational growth. Moreover, we suggest that the organizational logic of fiscal restraint does not affect how hospitals perform medical activities, but rather, further entrenches this technology through the adoption of standardized funding formulae.

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TABLE OF CONTENTS

	<u>Page</u>
Abstract	(iii)
Acknowledgements	(v)
Glossary	(viii)
Chapter One -- Introduction	1
Chapter Two -- Theoretical Framework: James Thompson's "Organization"	18
Chapter Three -- Methodology	34
Chapter Four -- The Task Environment of Ontario Hospitals: Hospital Funding in Perspective	55
Chapter Five -- Organizational Design	80
Chapter Six -- Administrative Responses to Fiscal Restraint	104
Chapter Seven -- Conclusions	149
Appendixes -- Supplementary Tables	
A Fiscal Allocations	165
B Hospital Utilization	169
C Hospital Staff	171
D Operating Costs	180
Bibliography	183
 FIGURES	
5.1 -- Hospital Committee Structure	83
5.2 -- Hospital Departmental Structure	92

6.1 -- Percentage Changes in Inflation, Actual Hospital Expenditures and Net Ministry Liability	109
6.2 -- Capital Funding per Population	112
6.3 -- Full-time Staff per 1,000 (patients)	120
6.4 -- Service Area Percentage of Full-time Staff	125
6.5 -- Service Area Percentage of Total Operational Costs	126
6.6 -- Percentage Increases: Ministry of Health Budget, Hospital Spending and Inflation	140

TABLES

6.1 -- Hospital Admissions per 1,000	116
6.2 -- Days of Care per 1,000	116
6.3 -- Out-Patient Visits per 1,000	117

GLOSSARY

AHE	Actual Hospital Expenditures
BOND	Business-Oriented New Development (Program)
COGP	Committee on Government Productivity (1973)
COHRAB	Committee on Hospital Resource Allocation and Budgeting (1980)
DOH	Department of Health
EPF	Established Programs Financing Act (1977)
GDP	Gross Domestic Product
HIDSA	Hospital Insurance and Diagnostic Services Act (1957)
HMRI	Hospital Medical Records Institute
HSC	Hospital Services Commission
MAC	Medical Advisory Committee
MOH	Ministry of Health
NML	Net Ministry Liability
OHA	Ontario Hospital Association
OMA	Ontario Medical Association
PPBS	Planning, Programming and Budgetary Systems
PHA	Public Hospitals Act (1970,1980)

CHAPTER ONE

INTRODUCTION

During the 1970s, the government of Ontario was prompted by a relative slowdown in economic performance to reduce growth in social service expenditures. Perceiving that 'growth in government' was contributing to inflation, and that such growth was becoming an excessive burden to maintain, the need to limit further expansion of government programs became the benchmark of Treasury activities [McKeough, 1971, 1975, 1977]. Thus, in marked contrast to the immediate post-war years, the apparent impetus for change was the desire to limit social services rather than permit continued expansion of the same.

Included in the Ontario government's 'policy of restraint' was the province's public hospitals. Though legally autonomous corporations, Ontario hospitals received about ninety percent of their operating revenues from the Ministry of Health (MOH). In turn, expenditures on hospital-based care consumed nearly fifty percent of the MOH budget. As Cabinet constrained MOH allocations, it became necessary to limit the costs associated with medical care.

The impact of fiscal restraint on Ontario hospitals remains tenuous. While there appears to be evidence that hospitals did adapt to restraint, by the early 1980s the costs of providing hospital services were again accelerating at a rate greater than inflation [Ontario, 1988b]. The implied conclusion is that resource scarcity did not result in sufficient organizational changes in how hospitals performed their work.

Explaining organizational change in response to fiscal scarcity continues to be a substantive policy question for health care, public administration and organization theory alike. As governments continue to attempt to limit the expansion of social services, the organizational effects of fiscal restraint remain inconclusive. We shall argue that any theory of organizational change must be able to explain how the organization adapts its internal structures and/or manipulates its environment to reduce the pressure for adaptation. That is, such a theory must first have a logical conceptual explanation of internal organizational action which is consistent with empirical conclusions. Secondly, such a theory should possess a conceptual understanding of the organization's environment if external change appears to be the primary determinant of the need to adapt.

In the following section we will briefly consider two dominant models specific to health policy analysis, and a third model drawn from organization theory literature. As will be argued, none of these conceptions of organizational adaptation adequately address both the internal and external responses to change, and are insufficient accounts of adaptations in Ontario hospitals between 1977 and 1984.

The 'Efficiency,' 'Rationing' and 'Administrative Models' of Organizational Change

In reviewing the literature of health care policy, two 'models' of organizational change appear to be dominant. The first 'model,' best illustrated in the work of Murray, Jick and Bradshaw [1984], is an explicit attempt to construct an organizational model of adaptation to fiscal restraint. In their study of six Ontario hospitals between 1977 and 1981, the authors suggest fiscal restraint followed a cyclical pattern of cost containment at the outset, followed by an increasing reluctance to make further cuts. Ultimately, this reluctance shifted to a more proactive strategy of obtaining additional resources from the MOH.

What distinguishes their 'model' of change (hereafter referred to as the 'efficiency model') from other perspectives are two basic assumptions. The first assumption is that initial hospital cost containment

introduced more "efficient" work habits. That is, hospital procedures and techniques were adapted to reduce resource consumption without adversely affecting the quality of hospital care. One can then further presume these adaptations were permanent changes which did not require additional resources in the future, except to accommodate increased patient loads. The second assumption is that the reluctance to impose further containment was limited by the simple fact that hospital operations had been 'cut to the bone.' As a result, continued fiscal restraint led to a perception that restraint was motivated by 'political' needs rather than that of more efficient medical care - the net result being a reluctance to make further changes.

The primary conclusion of the 'efficiency model' is that substantial changes which led to improvements in operational performance occurred within hospitals. Therefore, the 'model' implies that fiscal restraint achieved the objective of more "efficient" hospital care and decreased the pressures for organizational growth. But while the 'model' implies that Ontario hospitals became more "efficient," it is never specified by the authors how "efficiency" is defined. What the authors describe as a more "efficient" operations may simply reflect cuts in servicing as opposed to improved work procedures. Instead, the empirical verification of the model depends on the

perception of hospital administrators in interpreting their own actions rather than operationalized indicators of "efficiency." Lacking such indicators, it is not possible to conclude that hospitals did indeed become more "efficient."

The second 'model' of organizational change is an implicit perception of hospital adaptations found in health care literature. Most clearly articulated by Stoddart [1985], the 'model' suggests that the short term impact of fiscal restraint was the "rationing" of hospital resources and services until additional funds could be obtained from the MOH. Unlike the 'efficiency model', the 'rationing model' explicitly rejects the assumption that more efficient work procedures were implemented. Indeed, the main argument is that by virtue of physician self-regulation and a 'relative autonomy' in how they perform their tasks, administrators lack the authority to alter the types and procedures of medical care. Therefore, administrators were limited to rationing the availability of beds, staff and equipment in order to impose cost containment.

In contrast to the "efficiency model", the "rationing model" suggests no substantial changes occurred in how hospitals organized their work activities. Instead, the net result of these cost containment measures was a pent-up

demand for medical services which presumably had to be accommodated at some future date. While the 'model' avoids the problem of having to define "efficiency," it is based on the presumption that it was medical activities which were most affected by resource scarcity. In other words, Stoddart fails to make a conceptual distinction between medical and non-medical activities and simply assumes downward changes in provincial GDP expenditures on hospitals reflects the "rationing" of medical care.

The third 'model' of organizational change is drawn from organization theory and focuses on administrative changes in response to fiscal restraint. Like the 'efficiency model,' the 'administrative model' assumes that adjusted patterns of spending reflects "efficiency" rather than "rationing." Unlike the former which suggests the most substantial changes occurred in operational tasks, the 'administrative model' implies the more relevant adaptations will take place within the administrative component of the organization.

The 'administrative model' argues that the role of administrators is adapted to act on behalf of the entire organization rather than operational prestige and interests. To perform this new role, administrators must develop new managerial techniques. In her case study analysis of five American universities, Rubin [1977] provides a empirical

description of these adaptations to managerial performance. First and foremost, there was a distinct change in how allocations were made to the various departments. From a previous state of relative ease in securing new positions, department heads were increasingly subjected to higher level administrative demands for justification of increased hiring. Similarly, restrictive criteria were developed to examine and compare sub-unit needs and demands. In essence, Rubin argues the administrative component restricted departmental allocations by attempting to construct measures of "need" rather than "demand." By extension, these measures of "need" are assumed to reflect greater "efficiency" in organizational performance.

But the capacity of the organization to develop "need" assessments also requires that the administrative component collect more and different kinds of information than was previously required [Rubin,1977; Galbraith,1977; Cyert and March,1963]. The implication of the above is that an increasing percentage of organizational resources will be expended on administrative rather than core operational activities. While such adaptations could be conceived as corrective devices if these changes reduced overall expenditures through "efficiency," Rubin's case study (like Murray et al.,1984) does not define the term or provide operational indicators.

What makes the 'administrative model' problematic is that if these changes do not result in "efficiency," then arguably the organization might become less "efficient" in that more resources are being used for "non-core" tasks. As suggested by Bozeman and Slusher [1979], the problem with these changes in information collection is that the information tells administrators about current activities, but not how to change these activities. The implication of the 'administrative model' is that organizations will respond to fiscal restraint with a dysfunctional action that reduces spending on "core" tasks, yet unnecessarily increases spending on "non-core" tasks such as administration.

The above conclusions are based on two propositions. One is that these changes do not result in "efficiencies" but simply ration available resources. The other is that the administrative changes are exclusively intrinsic in purpose. As stated above, the 'administrative model' does not provide an adequate conceptualization and operationalization of "efficiency" to prove or disprove the first proposition. In relation to the second point, the 'model' fails to describe and explain the organization's environment which might account for extrinsic uses of information collection.

Indeed, despite the differences between the three 'models,' there is one striking similarity in that none of the 'models' provide an adequate conceptualization of inter-organizational relations. For the 'efficiency' and 'rationing' models, the only reference to inter-organizational relations is an oblique reference to political pressures being applied until the 'will' of government officials breaks down. With the 'administrative model,' the description is even less comprehensive and merely notes that the pressures for change were the result of external budget cuts.

Ironically, all three models are based on the presumption that it was changes in the levels of external funding which necessitated internal adaptations. The problems with the models then are twofold. First, the implication of change and conflict as the direct result of fiscal restraint is that previous inter-organizational relations were relatively harmonious. By extension, it seems reasonable to suggest there had been some type of agreement between the organizations and their environment which produced this stability. Secondly, if the resolution or diminishment of conflict is dependent on increased funding and/or a renewed inter-organizational agreement, it also seems reasonable to presume that some internal changes

and other organizational responses might be linked to the achievement of such an agreement.

In sum, the 'efficiency,' 'rationing' and 'administrative models' appear to be inadequate on both conceptual and empirical grounds as explanations of hospital responses to fiscal scarcity. In the next section, we will briefly outline our own 'model' of organizational change, and how it appears to be a better generalization of Ontario hospitals' responses to fiscal restraint.

Outline of Theoretical Argument

The theoretical basis of our thesis is drawn primarily from James Thompson's Organizations in Action [1967], a sociological perspective of organizations and a series of predicted actions to certain conditions. Our contention will be that Thompson's work provides a crucial link between short-term adjustments to resource scarcity and long term changes incorporating renewed political conditions for growth.¹

First and foremost, Thompson argues that all organizations seek certainty by reducing the complexity of internal task performance, and external contingencies and constraints. Therefore, an organization will seek certainty in two important ways. First, the organization will adopt

an internal work structure which sets out what work is to be done, when these activities are appropriate, who will perform what activities, and what is the acceptable outcome of the work performed.

Secondly, the organization will seek a "consensus" with those elements of the environment which they depend on for inputs, particularly fiscal resources [Thompson, pp28]. The notion of a consensus is similar to what Cyert and March [1963] refer to as a "negotiated environment" which helps the organization avoid the necessity of reacting to constant change and uncertainty. According to Thompson, the "domain consensus"

defines a set of expectations both for members of an organization and for others with whom they interact, about what the organization will and will not do.

[pp 29]

Thus, it is assumed the internal design, procedures and services will be relatively aligned with the "domain consensus" to ensure a stable supply of necessary inputs. If such an agreement is not in place, the organization will suffer uncertain conditions as a direct result of the incongruity between organizational performance and external demands.

More importantly, it is assumed that the role of the administrative component of an organization is to "mediate" between the internal conditions needed to perform "core

tasks," and the demands made upon the organization by segments of the environment. As such, the administrative component is expected to be the most 'flexible' structural attribute of the organization in order to perform a mediating role, while "core tasks" are presumed to be the most rigid given their need for stability and certainty.

Resource scarcity is presumed to indicate a change in the "domain consensus" and reflect changing demands made upon the organization. Specifically, the demand is for a more "efficient" and less expansive use of resources. Yet such a demand assumes that "efficiency" is something which can be easily quantified by organizational members and the necessary adaptations to performance identified. Thompson argues that when the technology used is unstable and uncertain, "efficiency" and "effectiveness" are difficult, if not impossible, to measure.² Therefore, the expected adaptations are not likely to be changes in the efficiency of the organization, but rather, other types of responses to adapt to the demands of the environment. More importantly, the changes should not be construed as merely dysfunctional attempts to become more efficient, but purposeful and predictable attempts to protect "core tasks" from uncertainty and to re-establish a consensus on the organization's domain.

The short-term responses will consist of a variety of efforts to "buffer" core tasks through the utilization of surplus resources. How many surplus resources any organization is likely to have will probably be limited and administrators will have to resort to another "buffering" tactic by re-allocating resources from "non-core" to "core" tasks. As with surplus resources, there is presumably a limit to how much re-allocation can take place before the reductions in "non-core tasks" begin to affect the operations of "core tasks." At this point, the organization must either spend more than it possesses, or obtain additional resources from the environment.

While a one-time increase in resources may resolve short-term fiscal uncertainty, it is inadequate for securing long-term security. For the long-term, the organization will attempt to secure a renewed consensus on domain activities and measures of performance. In essence, the organization will attempt to manipulate its environment and negotiate a consensus which will be stabilized in the form of a 'contract' or funding agreement. Moreover, the basis of this 'contract' will be the information obtained by the organization through new inter-organizational measurement systems.

In other words, the collection and standardization of 'new' information forms the basis of communication between

the focal organization and the funding agency. The specific indicators and criteria of the funding mechanism will ideally constrain the elements of discretion which may have been previously inherent in budgetary allocations. More importantly, because the information collected reflects current activities rather than adaptation of the same [Bozeman and Slusher, 1979], the consensus will continue to reflect the status quo. While the different means of assessment may constrain some discretionary behaviour within the hospital, it will similarly constrain environmental change.

In sum, our explanation of organizational change based upon Thompson's [1967] work, predicts hospitals will "buffer" core medical tasks using both surplus and non-core resources while it adapts its information collection and performance measurement systems. Rather than introducing more "efficient" operations, these collectively negotiated systems will allow hospitals to shape their environment in a way which allows for a re-negotiated domain consensus. While there may be a period in which the government is successful in reducing hospital expenditures, the 'new' consensus will reduce long term uncertainty, and renew the political conditions necessary for organizational growth.

A Study of Hospitals Under Pressure: 1977 to 1984

The time period of our study begins with the fiscal year 1977-78 and ends in 1983-84. Though fiscal restraint was not a new experience for Ontario hospitals, we have limited our study to a single and continuous initiative. The most attractive element of the period to be considered is the length of time in which hospitals were clearly subjected to conditions of scarcity (i.e. below inflation increases). The result is a time frame more prolonged than previous efforts which would allow hospitals adequate time and motive to institute adaptations.

The thesis to be presented will argue that fiscal restraint was a unilateral, top-down action by the Ministry of Health which disrupted previous agreements with the hospital sector on the appropriate levels of funding and services. While the expectation was that hospitals would become more efficient by re-organizing medical tasks and activities, hospital administrators "buffered" these areas of operations by first using surplus resources, and then re-allocating funds from non-medical activities. As the capacity of hospitals to "buffer" was diminished, hospitals incurred deficits or appealed their levels of funding.

At the same time, hospitals attempted to obtain additional resources through regular budgetary allocations. Rather than merely rely on traditional 'pressure-group' techniques via the Ontario Hospital Association, hospital administrators and Ministry officials engaged in lengthy, co-operative negotiations within the Hospital Medical Records Institute on a more appropriate information/measurement system. Subsequently, the unilateral action of the MOH was altered through a multi-lateral agreement on the types and levels of services to offered by Ontario hospitals and how these would be reimbursed. In other words, the MOH and hospitals attempted to formalize measurements of current activities and reduce future MOH discretion. Relative certainty was regained through a domain consensus which reflected changes to hospital administrative structures rather than their medical activities.

ENDNOTES

1. Current organization theory literature has no clear definition of what is meant by "short term" or "long term." While Cyert and March [1963] make reference to "short run" and "long run" decisions, they do not specify the temporal character of each. Thompson [1967] also makes reference to "short term" and "long term" with the added expectation that changes will come fast if necessary. The pivotal point then becomes how one defines "fast." Carroll [unpublished, 1989] suggests it is reasonable to presume that a period of one year should provide adequate time to react to change by altering decisions. Given the lack of agreement on the terms, our references to "short-term" refer to those changes which attempt to limit the immediate effects of budgetary restraint, while "long term" adaptations are assumed to be the more complex, inter-organizational actions which are directly related to future fiscal budgetary procedures.

2. For our purposes, an unstable technology means that the performance of certain tasks and activities will vary between patients, and is dependent on the feedback received from the individual being worked upon. An uncertain technology refers to the difficulties in determining an absolute cause and effect relationship between the techniques used and an ill-defined outcome.

CHAPTER TWO

THEORETICAL FRAMEWORK: JAMES THOMPSON'S "ORGANIZATION"

In this chapter we outline our theoretical 'model' and describe in greater detail the explicit and implicit variables, and predictions. We argue that the differences between the 'efficiency,' 'rationing' and 'administrative models' and Thompson's perspective are based on three distinct propositions. The first proposition is that the three 'models' presume a deterministic change in the environment from economic expansion to relative stability and decline. By extension, the second proposition is that the changes in environmental conditions alter the administrative component's role. And finally, these perspectives suggest that the entire organization is "flexible" and amenable to adaptations.

To address these assumed differences in organizational action, our explanation will incorporate a descriptive argument of Thompson's work in two sections. In the first section, we argue that rather than a change in role of the administrative component, Thompson suggests there is a change in how administrators perform their traditional role. Moreover, this change is less dependent on greater

operational "flexibility," but rather, relies on changes in administrative and non-core tasks. In the second section, we argue that while Thompson acknowledges the possibility that organizations must adapt to fiscal scarcity, the conditions of scarcity are not deterministic and unalterable, but subject to organizational manipulation and change. Accordingly, the 'model' provides a description of possible responses to fiscal restraint which incorporate internal adaptations to "buffer" inflexible core tasks from uncertainty, and administrative changes to alter environmental conditions in the long term.

Thompson's "Organization"

Building on the theoretical foundation conceptualized by Talcott Parsons [1960], Thompson perceived the organization as consisting of three subsystems of responsibility and control: the institutional, the managerial and the technical core [pp 10-11]. The institutional subsystem is primarily responsible for ensuring the organization's capacity to function within the broader societal environment by legitimizing its technology and gaining social acceptance for the work it performs. The managerial subsystem is mostly concerned with acquiring

resources for technical activities and establishing a market for the organization's output. Moreover, the managerial subsystem is responsible for co-ordination and "mediating" between the external environment and technical core [pp 10-11]. Finally, the technical subsystem is primarily involved in the technical production of the organization [pp 10].

Thompson suggests that in the short-run, the managerial component of an organization will "rationally" seek the reduction of uncertainty for technical activities by protecting these from external fluctuations and disruptions [pp 150]. Doing so requires the assurance of a reliable flow of needed resources by either acquisition or growth [pp 21,39]. Thompson argues that in the long run the administrative hierarchy will seek flexibility through the accumulation of uncommitted resources to assure survival in an uncertain future [pp 150].

Conceptually the former suggests the possible utilization of existing uncommitted resources to ensure minimal disruptions to daily operations. In turn, the latter task is suggestive of the desire or perceived "rational" need to avoid the commitment of resources in anticipation of future contingencies or opportunities. The so-called "paradox of administration" offers no determinate resolutions of the inherent conflict between certainty reduction and flexibility. Instead, the decisions on how

and where to allocate resources are discretionary actions [pp 148-150].

By extension, the logical assumption is that if there exists an abundance of available resources, the capacity of the organization to balance higher and lower level "needs" will be enhanced. That is, a growing organization might reduce the contingencies facing technical activities and simultaneously address the desire for surplus resources [Cyert and March, 1963; Thompson, pp 128]. From this perspective, growth is an organizationally rational alternative for both technical production and future fitness. Yet this is not the same as saying the organization will always act according to this principle. Not only must growth be aligned with available resources, but there is also a presumed point of equilibrium when growth may no longer be necessary. In other words, Thompson's critics and subsequent 'non-growth models' confuse the desirability of growth with the inevitability of growth.

While the above describes Thompson's conception of the administrative component's assumed role, it is still necessary to consider how the performance of this role changes in response to fiscal scarcity. Given the assumption that management will act to protect or "seal off" the technical core of the organization, some order of

techniques are required to fulfil these functions. Thompson suggests there is a 'continuum' of responses, each proposing more intensive and intrusive actions within the technical core [pp 20-24]. The 'continuum' consists of four types of responses moving from "buffering," "smoothing," "forecasting," and "rationing" [pp. 20-24].

The 'continuum' itself is based on the degree of encroachment within the technical core rather than the order of selection. That is, an intrusive response may be utilized immediately, or different techniques on the 'continuum' may be implemented simultaneously. For example, the organization may forego some maintenance of their physical plant while at the same time altering treatment schedules to deal with projected swings in demand. The "buffering" technique of foregone maintenance has no direct immediate effect on work activities, while "forecasting" obviously involves some changes to previous patterns of work habits. Essentially, the series of devices employed recognizes the protective utility of a particular technique is diminished because of the differing types of technology employed by organizations, and the varied severity of external contingencies and constraints.

The first type, "buffering", means the organization absorbs environmental fluctuations through the stockpiling of resources, preventive maintenance and the acquisition of

resources [pp 21]. The first two incorporate additional costs to the organization as a whole to ensure that access to resources will be relatively stable and prevent unpredictable failures in operations. Similarly, the acquisition of resources is a task essential to all organizations in that no organization can be expected to be self-sufficient [Barnard,1938; Selznick,1948; Dill,1958; Thompson,1967]. In essence, each task requires that some component of the organization perform activities not explicitly related to the technology.

Though not stated by Thompson, another potential "buffering" technique is the accumulation of fiscal deficits by the organization. In other words, managers might use future resources to handle immediate contingencies with the expectation that they will acquire additional resources in the long term. Conversely, the organization may delay long term demands to meet immediate needs with the expectation that future resources will be sufficient to allow these long term demands to be met. And finally, the organization might attempt to reduce the overhead costs of maintenance or other "buffering" devices and re-allocate these funds to its technical core.

The next order of response constitutes a "smoothing" or "levelling" of environmental demand [pp 21]. "Smoothing" requires the organization to adjust uneven demands for the

product or service offered to ensure more continual and manageable technological performance. By physically transforming these demands through scheduling (e.g. elective surgery), the timing of demand is adjusted to "best fit" technical operations.

In turn, the third device of "forecasting" necessitates a qualitative shift to a more direct intervention in technical activities. Temporal variations in demand that cannot be resolved through "smoothing" must be accommodated by altering technical activities as opposed to demand. That is, the productive forces of the organization must be regulated to adjust to sporadic, yet predictable, changes in demand. For example, hospitals might foresee the likelihood of increases in emergency room volumes during the summer weekends and must adjust their levels of staffing accordingly. Thus, forecasting allows the organization to transform what might be "problems" in product or service delivery to "constraints" on the internal pattern of its activities [pp 22].

Finally, Thompson describes what he defines as the "unhappy solution" - the rationing of resources [pp 23]. At this juncture, the technical capacities of the organization are curtailed by a lack of human and capital resources. Therefore, one end of the 'continuum' contains an explicit recognition that not only might "growth" have to be

contained, but that some order of 'cutbacks' may be essential for organizational survival. Ultimately, the necessity of rationing indicates the failure of less intrusive responses to resolve the problematic contingencies facing management. But rationing is presumed to be a temporary condition if technical performance is not to be diminished on a long term basis [pp. 23-24]. At this stage it is presumed the organization will adapt its procedures or tasks to maintain a high level of organizational outcomes despite fewer resources, or obtain additional resources to relieve the need to adapt the technical core.

For Thompson, the types of organizational adaptations to be made are likely to be influenced by the certainty and stability of its technology. That is, how the organization uses its resources and how it measures its performance is explicitly linked to the certainty or uncertainty of the technology used by the organization. When the technology is uncertain and unstable as are medical techniques, task certainty is more problematic. The instability of medical techniques is resolved by delegating discretion in work habits to providers and "certainty" is provided professional norms and education rather than "routinization."

Those professionals using organizational resources will in all likelihood possess a large degree of discretionary power in what resources are needed and how they are to be

used. In other words, the lack of certainty in task definition and performance would create a strong dependence between those performing on behalf of the organization and those responsible for technical activities [Thompson,1967; Perrow,1961]. Logically, the dependence of the organization on professional staff means change must be negotiated. Similarly, adequate resource levels which affect professional behaviour must be negotiated or at least imposed with minimal conflict.

Further complicating the task of resource acquisition and allocation, an uncertain technology requires the organization to substitute the actual work performed and resources used as an indications of its effectiveness in production. That is, the output of the organization becomes the "process" of what is being done [Thompson,1967; Suchman,1967; Scott,1977,1987]. Since "doing less" runs counter to how the organization assesses its own performance, the type of assessment must be aligned with the organization's technology and "output." Therefore, administrators will seek out surrogate performance indicators of "efficiency." Thompson suggests two possible surrogate measures: "historical improvement" and "comparative performance" [pp 89]. Historical improvement is the measurement of an improvement over previous years in

expenditures, volume of services or similar quantifiable and comparable sets of indicators. Comparative performance on the other hand, refers to the record of similar kinds of organizations using the same indicators.

But while the above "efficiency surrogates" may allow the organization to justify its performance in the short term, it seems reasonable to presume they are insufficient "tests" if technical performance is to be maintained. Each tend to be based on "process" indicators which, if limited, constrain the ability of the organization to maintain or expand its level of technical activities. As a result, the development of the surrogate measures must be closely aligned to the tasks performed by the organization and the costs associated with the same.

The development of these measures depends on two changes. As suggested by Rubin [1977] and Galbraith [1977], the first change is the collection and "analysis" of more information than the organization processed prior to 'scarcity.' By extension, the second change will presumably incorporate the participation of existing and/or new members, and the allocation of additional resources to these tasks in order to compile and "evaluate" the information.

In all likelihood, such information will tell organizational managers more about what the organization does than how to change what it does [Bozeman and

Slusher, 1979]. The implication of this is that the information will be used for "intrinsic" purposes such as "smoothing" or "forecasting." But in that the possible 'savings' which can be acquired from these techniques is limited, prolonged rationing will occur, if it has not already. What is necessary for the organization is that intrinsic changes in organizational assessment must have some extrinsic value if rationing is not to be prolonged and the organization is to survive. The expectation is that when the organization cannot adapt its activities to conform to fewer resources, it will seek to increase the supply of resources and re-establish conditions of 'growth.'

Shaping the Environment: External Responses to Fiscal Scarcity

While the above suggests that organizational adaptation will consist of short term "buffering" and revised information collection, it remains necessary to consider how the latter is developed to serve extrinsic needs. Thompson suggests there are two possible "strategies" which organizations might use to secure more resources [pp 32-36]. The "competitive strategy" involves reducing the degree or scope of dependence the organization might have in relation to another. The organization might do this in two ways.

The first way is to minimize external dependency relationships by maintaining alternative sources of resource inputs. The second way is to achieve "power" by acquiring "prestige" within the larger environment. That is, the greater the prestige of the organization relative to its external source of inputs, the higher the probability the organization will succeed in acquiring more resources. Similarly, if the environmental actors cannot demonstrate that their actions are not harming the organization's technical performance, the legitimacy and acceptance of the technology will in all likelihood constrain the discretionary allocation of resources.

"Cooperative strategies" are more closely aligned with what Cyert and March [1963] refer to as a "negotiated environment." According to Thompson, cooperation is likely to be used in three ways: contract, cooptation, or coalition [pp 35-36]. Contracting involves an agreement on future inter-organizational exchange. Coopting involves the incorporation of external members into the leadership of the organization [Selznick, 1948]. And lastly, coalition refers to "a combination or joint venture with another organization or organizations in the environment" [Thompson, pp 36-37]. As such, the use of cooperative strategies are assumed to play a stabilizing role which minimize conflict and emphasize relatively harmonious communication and relations.

While the two strategies outlined by Thompson explain the necessity and means by which environmental certainty is secured, there remains a need for a description of the processes by which this certainty is institutionalized. Recent developments in describing pressure group behaviour have begun to consider the differing roles collective organizations play for their constituent members. Coleman [1985] suggests that interest groups may play two distinct roles of advocacy and policy participation. The former concentrates on what is seen as the typical role of interest groups: lobbying activities through power and influence. Policy participation involves interest group activity in the formulation and/or implementation of policy. Moreover, Coleman suggests that the differing roles may be conflictual and require a separation in the form of two interest groups rather than one which performs both roles.

The distinction between advocacy and participation is aligned with Thompson's notion of "competitive" and "cooperative" strategies. In other words, an advocacy role involves the use of prestige acquisition to maximize fiscal allocations. Conversely, the cooperative strategy incorporates negotiation and the exchange of information in an attempt to resolve ongoing conflict, and hopefully establish a new consensus on domain expectations.

While both strategies are organizational devices to obtain external certainty for its members, each leads to two distinct predictions for inter-organizational negotiations. In the case of the competitive or advocacy group, we would expect to see the use of power to secure adequate resources on a year to year basis. But in that such a process is potentially unstable on a long term basis, there will be an attempt to negotiate a formal, institutionalized domain consensus on performance expectations and reimbursement.

Conversely, it is within the cooperative or policy participation group in which we would expect to see an exchange of information and negotiation of a consensus. Therefore, the changes in information collection and performance standards noted by Rubin [1977] will not be developed within the organization, but rather, through the collective efforts of the participatory or cooperative group. Within this group, information will be 'standardized' and accumulated so that performance can be assessed and reimbursed. This agreement or negotiated consensus will not only establish the rules of distribution, but also decrease the opportunities for discretion with regard to how many resources are allocated. More importantly, if the domain consensus is based upon how to accurately assess current performance and reimbursement

rather than future change, the external impetus for adaptation of the technical core is relieved.

Summary

In this chapter we have argued that James Thompson's, Organizations in Action [1967], identifies a series of possible administrative responses to fiscal restraint. Essentially, Thompson argues that changes in the environment from relative abundance to scarcity will alter how the administrative component performs its traditional task of "mediation." As a result, the most substantial 'internal' adaptations will occur in the administrative and non-core components of organizational tasks and activities. While changes in non-core activities will be related to the perceived need to "buffer" the medical core, adaptations to the administrative component will be internal responses to change the organization's environment.

Based upon the above, we predict the following responses to scarcity will be observed in Ontario hospitals:

- 1) An initial "buffering" stage of all activities through the use of surplus resources.
- 2) Substantial changes to non-core activities which decrease the amount of resources allocated to these areas of operation.
- 3) Substantial changes to the administrative component in how it collects and exchanges information.

- 4) In support of the above prediction, changes in information collection will be achieved on a collective basis within a cooperative strategy group
- 5) Increased advocacy by a competitive strategy group for an increase in funding, and a negotiated consensus which stabilizes long term allocations.
- 6) The acceptance of an inter-organizational domain consensus based upon current technology.

In the next chapter we will review our methodology and the indicators used to empirically confirm or disprove our predicted responses. In the following chapters, we will operationalize our framework, and discuss the implications of our conclusions for the study and practice of health care policy.

CHAPTER THREE

METHODOLOGY

In this chapter we review the methodology used in our study. The primary intent is to list the sources of information obtained, the reliability of the information, and how it is to be used and interpreted. Our research design consists of two "types" of information: qualitative and quantitative. The former includes information derived from archival sources, literature reviews and anecdotal accounts obtained through interviews with government and non-government officials. The purpose of this information is to establish a contextual background to hospital funding, and describe the task environment and internal design of hospitals. Rather than conclusive, the qualitative information is hoped to establish a framework which might account for observed changes in the quantitative data.

Our quantitative data has been collected primarily through official Ministry of Health documents, particularly Hospital Statistics [Ontario, 1970-1986a]. The information used is related to the levels of funding, and hospital spending and staffing patterns. Our analysis uses a number of simple comparative statistical methods. One is a

comparison of the total amounts of ministry allocations and hospital spending. The second is a series of ratios which document changes in hospital spending patterns and levels of staffing.

The chapter is divided into two sections discussing the reliability and interpretive value the qualitative and quantitative data. In the first section, we address more specifically how the qualitative information was collected and how it should be interpreted. In the second section, we clarify the sources of information and methodology of each constructed indicator presented in the form of graphs and tables.

Qualitative Information: Validity and Interpretation

As noted above, these sources of information are to provide a contextual background for the years between 1977 and 1984, and to assist in our description of the task environment and internal design of Ontario hospitals. Using Thompson's conceptual description of organizational characteristics as a guide, we hope to establish an explanatory framework which might explain (or disprove) the conclusions drawn from the quantitative data.

In describing the task environment we have drawn from a number of sources. First and foremost are government

documents such as ministry studies and commission reports which describe the mechanics of government, ministry and hospital budgeting. In support, we have drawn from a small number of independent studies on hospital financing which either reinforce our own conclusions, or add additional observations.

The obvious weakness is that no doubt these authors are drawing information from the same sources as ourselves. Nevertheless, these other sources provide our study with something otherwise lacking - that is - personal anecdotal accounts or observations by ministry officials. With the passage of time, tracking down relevant participants able to recall past events constituted a possibly time-consuming task with questionable results. In addition, the reliability of such informants may be further questioned in that it expects a small number of individuals to provide explanations and motives for ministry actions.

Instead, we attempt to establish the broad framework of hospital financing and the changes in how funds were allocated. Rather than specify why such changes were made, or detail the "politics" of budgeting, we have limited ourselves to the assumed roles played by the Ministry of Health as the primary source of revenue for hospitals. Doing so allows us to note the changes from a line-by-line

budgeting system to program budgeting, and variations in the levels of hospital funding. On the basis of the qualitative information describing broad changes in the "process" of funding, we hope to establish the external changes which affected hospital operations and required administrative responses.

A similar method has been employed in reviewing the Ontario Hospital Association and Hospital Medical Records Institute. Again the passage of time has limited accessibility to officials, and reduced the reliability of any information obtained. Therefore, we have relied on a survey of relevant position papers and other types of "analytical" literature to describe the roles each organization appears to play. Indeed, on the basis of our literature survey and a review of publicized action, we avoid the potential problem of being told what a particular official thinks the organization is doing rather than what the organization does. For example, while we were assured by one official that ministry-OHA discussions involve the "analysis" of hospital data, the word negotiation was limited to ministry behaviour. Because of the possible bias inherent in some interviews, we consider it prudent to note that such discussions or advocacy sessions take place, and not comment on the micro-level behaviour contained within.

The second element of relevance with regard to the qualitative information obtained is for our description of how Ontario hospitals are designed. A series of steps were taken in completing our depiction of the "typical" Ontario hospital. First, we conducted a literature review of both Canadian and American health care studies with an obvious concentration on hospital organization. The one consistent conclusion reached by the authors is the so-called "two lines of authority" which exists between the administrative and medical components. While the same sources included some accounts of the effects of this arrangement, we bypassed these for information specifically derived from Ontario sources.

The next step was a review of hospital organization charts from Ontario institutions only. In doing so, we did not systematically categorize similarities and differences. Rather, the main issue of concern was validating the structural divisions between administrative and medical members. After reviewing about fifty organization charts (out of over 200 hospitals), we found that virtually all hospitals utilized such a structural distinction.

At this point, we used a variety of sources to consider how the internal design of hospitals influences fiscal allocation and the management of resources. The inability

to gain official access to hospitals limited our capacity to understand and explain departmental management. To get around this problem, we used a small number of casual informants working in Ontario hospitals to describe their perceptions of the internal workings. In addition, we did manage to briefly talk with one hospital director. Because of the small number of informants and the type of information obtained, it was necessary to do two things. One was to restrict our focus on how resources are allocated (rather than how they are subsequently "managed" by departments). The other was to seek out additional literature related to hospital operations in support of the above.

There have been relatively few government inquiries into hospital management. The two most comprehensive have been the Dubin Report [1983a] on the Sick Children's Hospital of Toronto, and the Inspector's Report [1981a] on the Toronto East General. While neither was mandated to examine the allocation process, both included substantial information on some aspects of hospital budgeting. In addition, each provided rather comprehensive explanations of department-committee relations and activities. To supplement these studies, we surveyed the report of the Conjoint Committee's [1988a] operational review of twenty-

three Ontario hospitals, and the conclusions reached by the Committee.

Thereafter, we sought out any additional independent studies on hospital design and budgeting which could reinforce, expand upon or disagree with the information we obtained. Having collected the above, we proceeded to construct a "typical" hospital structure and describe the parameters of organizational roles and budgeting. As noted in our discussion on the task environment, the intent is not to present a detailed account of micro-level behaviour and "politics," but provide a qualitative framework which might account for quantitative observations.

Quantitative Information: Validity and Interpretation

The quantitative data used covers a period between 1975 and 1984. While the topic of study is specifically concerned with the years 1977 to 1984, the pre-1977 material is meant to serve as a comparative point of reference highlighting observed changes in funding, spending, staffing and levels of care. The methodology uses either total hospital spending, or ratios involving spending and staff. As a result, the statistics presented record only sectoral level changes, not variations between hospitals. Therefore, at no time can we state with confidence that all hospitals

were responding to restraint in the same way. Nevertheless, in that MOH policies presumably sought to affect all hospitals and their activities, if the greater proportion of sectoral spending remained stable then we can suggest that such changes were not occurring at the scope or depth desired.

As stated, the possible administrative responses by hospitals would be to attempt to "buffer" core medical activities until sufficient adaptation in work habits occur, or additional resources were obtained. More specifically, we anticipate that these "buffering" devices will include the use of surplus resources until exhausted, and then resources drawn from non-core activities. At this stage of transition, hospitals will be successful in obtaining additional resources and securing a formalized agreement or 'contract' related to future allocations.

To observe the possible changes stated above, we have constructed a number of indicators. These are as follows:

- i) Percentage Changes in Inflation, Actual Hospital Expenditures and Net Ministry Liability

This indicator measures changes in ministry allocations and actual hospitals expenditures. The observed changes are presumed to indicate the degree of restraint imposed by the

MOH, and the extent to which such restraint translated into actual reductions. Based on our hypothesis, we would expect that four primary changes will be observed. First and foremost will be a decrease in the percentage increases allocated by the MOH to hospitals which indicates a period of restraint. In response to the imposed restraint, we would expect to see an initial period in which hospital "buffer" operations by spending more than officially allocated. In turn, a continuation of MOH restraint will require that hospital expenditures will be approximately the same as allocated by the MOH due to reduced surplus resources. Finally, we expect to find that MOH allocations will increase as the severity of restraint is eased and a new "consensus" is established.

One problem in interpreting these outcomes is that up to 10% of hospital revenues come from sources other than the MOH. Unfortunately, these additional revenues vary widely between hospitals and it is difficult to account for the total effect this may have on sectoral spending. Therefore, when NML and hospital spending are relatively symmetric, we presume hospitals are spending approximately what they receive in operational revenue from the Ministry without resorting to deficits or other resources.

The primary sources of information used are the Ontario Budget [Ontario, 1970-1986b] and Hospital Statistics

[Ontario, 1970-1986a]. We have used the budget to obtain the Treasury's estimates of provincial inflation according to the Canadian Price Index. The CPI is not an accurate indicator of hospital inflation which is estimated to be higher than provincial price increases [Ontario, 1989b], but it does provide a counter-point to fluctuations in both MOH allocations and hospital spending.

The totals related to Net Ministry Liability and Actual Hospital Expenditures are drawn from the annual release of Hospital Statistics [Ontario, 1970-1986a]. There are a number of problems related to the reliability of this source. One is that the reported totals are not audited for accuracy. While actual hospital budgets would be a more reliable source, there are problems there in availability for the years to be studied. Secondly, the data does not provide details as to what sort of responses were being made to affect spending patterns - that is - whether deficits were being accumulated or surplus resources being used. Similarly, Hospital Statistics [Ontario, 1970-1986] does not provide details on whether appeals or bail-outs were being made. Therefore, some spending which is included in the totals presumably overlaps between years. For example, the large deficit bail-out provided by the MOH in 1982-83 is more properly related to spending in previous fiscal years.

Finally, the methodology employed is problematic in that it fails to account for variations between hospitals. While we might suspect that there are variations in spending, appeals and deficits, we can neither describe or explain them. As a result, our perspective is limited to observed sectoral level changes in actual spending.

ii) Capital Funding per Population

Like the previous indicator, the changes in capital funding are assumed to be a measure of fiscal restraint. In this case, yearly changes in how many capital resources were allocated per citizen are assumed to indicate restraint and vice versa. As with operational allocations, we would expect to see a decline in how many fiscal resources the MOH allocates indicating a period of restraint. Conversely, we would expect to see increases in the volume of capital funds allocated as the MOH eases the severity of restraint.

In that we are using total capital spending, we are unable to account for or explain possible variations between hospitals. That is, we only consider sectoral spending on capital projects and equipment. Similarly, we do not account for hospital spending from their own capital foundations without MOH assistance. In addition, our use of per capita spending does not account for the restriction of

'growth' due to technological developments which might require large capital outlays.

Even more problematic is our inability to adjust absolute spending to account for inflation. That is, long term increases in capital expenditures may not reflect expansion, but the cost of maintaining hospital domains. Nevertheless, the dramatic jumps in spending between 1982-1984 (a period of relatively low inflation) suggests factors other than inflation account for at least some of the increases in spending.

The information has been obtained from the Ministry of Health's Annual Report [Ontario, 1972-1986], with further information acquired from the annual Expenditures [Ontario, 1970-1986c] and Public Accounts [Ontario, 1970-1986d]. The use of several sources of information is due to the variations in the reported totals of capital funding. Many of the variations are the result of announced spending which is subsequently delayed. As might be expected, the most accurate data has been drawn from the Annual Report and Public Accounts which are post-hoc accounts of spending. Where the totals are the same or relatively close (within 2%), we assume the totals to be reliable. When such a similarity is not evident and we are unable to account for the difference, we have selected the lower figure. As a

result, our actual totals are somewhat 'conservative' and may be biased downward.

iii) Hospital Admissions, Days of Care
and Out-Patient Visits per 1,000

Changes in the number of hospital admissions, days of care and out-patient visits are all assumed to give some indication of the degree of "rationing" or "buffering" hospitals may have implemented. Since we have predicted that "core" medical activities would be relatively 'inflexible' to the pressures of change, we would expect to see little or no "rationing" in the volume of care performed by Ontario hospitals. That is, admissions, days of care and out-patient visits will remain relatively stable or increase despite the imposition of fiscal restraint.

Interpreting our results is difficult on a number of grounds. Prior to 1977, out-patient care (single day admissions) were included with in-patient services rather than separated. [Deber and Vayda,1985]. With a change in how hospitals reported on their activities, the 1976 and 1977-78 data are not comparable. Because we are unable to separate those patients receiving care on an out-patient basis before 1977 we are unable to observe the changes between the two fiscal years.

Secondly, we cannot conclude with any confidence that the expansion of ambulatory facilities constituted a "growth" in hospital services. What makes the interpretation problematic is that we could not find or devise an accurate means by which the shift in the setting of care could be measured and compared. While admissions to each setting would provide a rough estimate of total numbers, the MOH reports on out-patient care as visits rather than admissions. Therefore, we lack a method which would allow us to detect with great precision growth in out-patient care which is greater than any noted decreases in in-patient services. Despite these problems in measurement, we believe the consistency, magnitude and direction of percentage changes recorded by each indicator on a year to year basis does provide some evidence of whether "buffering-growth", "rationing" or "efficiency" was occurring.

As can be seen, the above indicators do not include data related to the number of beds or waiting lists which would provide a better measurement of "rationing." While the use of such information would be desirable, there are serious problems in the validity of the data and, in the latter case, no such information is available. For the former, the MOH did not maintain a consistent and valid central system of counting beds in use [Deber and

Vayda,1985]. One method of reporting, 'approved beds,' has only been used since 1976 and cannot be used to compare pre- and post- restraint totals. More importantly, these figures do not provide information on whether the beds 'approved' are in service. In contrast, reporting on 'beds staffed' is not subject to quality control checks, and does not record possible changes in operational status on a day to day basis [Deber and Vayda,1985]. Moreover, even if reliable data was available on the frequency and number of bed closures, we would still be unable to determine if this was due to cost containment or seasonal variations (e.g. summer holidays). Essentially, the lack of valid information on total reported and staffed beds precluded us from using this as an indicator.

The source of the data related to in-patient and out-patient care is Hospital Statistics [Ontario, 1970-1986a]. As noted above, there is a possible problem of reliability in that the figures are not audited by the ministry.

iv) Full-time Staff per 1,000 (patients)

Changes in the number of staff per patients provide a measure of the changing labour intensity of hospital activities. What we cannot explain is whether any observed decreases are related to more efficient techniques being

used in these areas of operations, or if the resources allocated are simply being rationed. If "non-core" activities are the most flexible component of hospital operations, we would expect to see the labour intensity decline in this area (i.e. fewer staff per 1,000). Conversely, if "core" activities are relatively 'inflexible,' we would expect to find that the labour intensity of these activities remain relatively unaffected by fiscal restraint.

For our purposes, "core" activities will include diagnostic services, special services (e.g. physiotherapy) and nursing.¹ "Non-core" activities refer to those working in the areas of general administration, food services, laundry services, maintenance and housekeeping.

To limit the number of graphs presented, we have elected not to include a similar ratio for part-time staffing, and have included the absolute figures in Appendix C. Briefly, the expectation might be the incorporation of a larger number of part-time staff to increase flexibility in reducing or re-distributing staff, but only in relation to a decrease in full-time staffing. Otherwise, increases in part-time staffing indicate "growth."

The information is obtained from Hospital Statistics [Ontario, 1970-1986a] and Annual Hospital Statistics [Canada, 1975-1986]. As already noted, the lack of an audit

means the reliability of the information depends on how accurately hospitals report on staffing levels and distribution. To address possible inaccuracies in reporting, we compare the totals reported in each source, but selected the lowest estimate when there is a discrepancy.

v) Service Area Percentage of Full-time Staff

Whereas the previous indicator measures declines or increases in labour intensity, the percentage of staffing per service area indicates how human resources are distributed and used to support certain hospital activities. If our thesis is correct, we would expect to find an increasing proportion of organizational resources being used to support those activities perceived to be most important to the continued fitness and survival of the organization. That is, the effects of "buffering" will alter how the entire organization functions by changing how it distributes its labour.

As such, we would expect to see an increase in the percentage of staffing in "core" medical activities, and a decrease in the area of "non-core" activities. The exception to the latter change will be in the area of administrative activities (including medical records) which

will remain relatively stable or constitute an increasing proportion of organizational labour.

The data has been collected from the same sources as our previous indicator and has the same problems in accuracy and validity.

vi) Service Area Percentage of Total Organizational Costs

While the previous indicator measured changes in the patterns of organizational staffing, this indicator measures altered patterns of per diem costs by service area. As such, it captures not only possible increases in labour intensity, but also the price of labour, operating costs of equipment and needed supplies. Despite the difference in what is being measured, our argument suggests that "core" and administrative tasks would acquire an increasingly larger share of total organizational resources than "non-core" activities. Accordingly, we would expect to find that an increasing percentage of organizational resources were being used by "core" activities and a corresponding decline for "non-core" activities.

Unfortunately, there are a number of possible problems in the data which cannot be detected and removed. First and foremost, is the lack of standardization in how hospital managers assign costs. As a result, there exists a strong

possibility that costs are being moved across departmental boundaries and thereby increasing relative shares. More importantly, the reasons for such variations may be more to "hide" particular types of spending rather than more precisely assign costs. In addition, the inclusion of medical records within special services (ancillary) means that we are not able to describe changes in either area.

vii) Percentage Increases -- Ministry of Health Budget, Hospital Spending and Inflation

The final indicator used is not related to hospital activities, but rather, attempts to further quantify their changing environment. In essence, the indicator measures the relative share of hospital funding as a percentage of overall MOH spending. A decreasing hospital share of decreased MOH spending and re-allocations to non-institutional areas is assumed to further indicate "domain contraction." Conversely, a stable or smaller share of significantly increased MOH expenditures is believed to indicate a period of "domain maintenance."

We expect to initially observe a decrease in allocations to hospitals from a smaller MOH spending pie. If hospitals are successful in re-shaping their environment through competitive and co-operative strategies, we would expect to see an increase in hospitals' share of MOH

spending, and/or an overall increase in MOH expenditures. In essence, we expect to find that the policy of restraint and reallocation cannot accommodate the maintenance of hospital domains and necessitates a growth in MOH spending.

The information has been collected from a number of sources including the Ontario Budget [Ontario, 1970-1986b], Public Accounts [Ontario, 1970-1986d] and the Ministry of Health's Annual Report [Ontario, 1972-1986]. As with our first two indicators, there are a variety of discrepancies in reported spending by the MOH. Moreover, there is an overlap in expenditures across fiscal years. We attempted to account for the discrepancies in reported spending, but when unsuccessful, we used the lower figures.

ENDNOTES

1. As will be discussed in Chapter Five, our inclusion of nursing care as a core activity assumes there are two components to the "type" of care provided by nurses. The first component is the following of physician orders (such as medication) and surveillance of the patients' condition. The second component consists of more discretionary techniques such as personal attention to the patient (including conversation and attending less medical needs). Based upon this assumption, we suggest there are some elements of nursing which are not necessarily "core" activities and therefore more vulnerable to change. As a result, there may be some decreases in nursing care, but the severity of these changes will be limited.

CHAPTER FOUR

THE TASK ENVIRONMENT OF ONTARIO HOSPITALS: HOSPITAL FUNDING IN PERSPECTIVE

As suggested in Chapter Two, a domain consensus must be negotiated by hospitals with those segments of the environment upon which they are dependent for resource inputs. Moreover, we suggested the best indicator of a domain consensus is the funding formula or 'contract' established between hospitals and the MOH. A unilateral and conflictual change in the how and how much funding is allocated would be presumed to indicate a breakdown in the consensus. Therefore, two relevant factors which need to be considered are the changes in both the levels of funding and negotiating process, and the competitive and co-operative strategies used to re-establish a consensus on domain.

The purpose of this chapter will be to describe the roles various external organizations play in hospital funding, and identify the changes hospitals faced in providing medical services. In the first section, we discuss the role the Ministry of Health plays as the primary source of revenue for hospitals, and the constraints this role places on hospitals. In the following section, we shall discuss how the Ontario Hospital Association and

Hospital Medical Records Institute pursue competitive and co-operative strategies in negotiating a consensus on hospital domains.

The Allocation of Funds: Ontario's Ministry of Health

The Ministry of Health is officially responsible for legislation, funding, programs, services and facilities required for the prevention of disease, the promotion of health, and the care, treatment and rehabilitation of the sick and disabled in the province [Ontario, 1970, 1980]. The legal parameters of these responsibilities include 32 legislative Acts and 31 programs and services. Yet the performance of these tasks remains an anomaly. By virtue of the Public Hospital Act and the corporate status of each institution, hospitals are distinct organizations from the MOH. While the minister can veto hospital decisions and regulate their behaviour, the relative corporate 'autonomy' of each seems to reduce the frequency of direct intervention. Instead, the MOH functions primarily as a funding agency for hospitals which potentially may act as a constraint on the 'relative autonomy' of the institutions.

Having assumed the responsibility of resource acquisition, the ministry must procure and distribute revenue. While the ministry retains final authority in the

decision making process (unless appealed directly to Cabinet), the procurement and distribution tends to be conducted on a negotiated basis between the MOH, individual hospitals and in consultation with the Ontario Hospital Association.

The introduction of public hospital insurance did not alter the existing organization of medical care in a hospital setting. Rather, the Hospital Insurance and Diagnostic Services Act of 1957 [Canada, 1957] adopted the traditional relationship between hospital, physician and patient. But public hospital insurance did dramatically alter the task environment of hospitals in a number of important ways. First, the need to locate and obtain fiscal resources was simplified by locating almost all revenue within a single institution (the Hospital Services Commission). In doing so, a strong dependency between hospitals and government was established allowing little room for the development of alternative sources of revenue. In sum, the government was the legal source of funding for more than ninety percent of operating expenses, and from fifty to one hundred percent of capital funds.

Secondly, to compensate for hospital fears that increased fiscal dependence would affect their 'autonomy,' the semi-autonomous Hospital Services Commission was established as a political "buffer" for the development and

implementation of policies related to hospital services. That is, the Department of Health delegated most decisions and relied on the medical expertise and judgement of the HSC. To secure the 'autonomy' of the Commission, the HSC executive was composed of former hospital, OHA and Ontario Medical Association members who considered themselves to be "partners" in the development of a comprehensive medical-care system [Taylor,1987; Deber and Vayda,1985].

In addition, resource acquisition was formalized and made routine with the implementation of a standard budgetary process consisting of loose criteria related to "need" [Ontario,1974b; Ontario,1980]. More importantly, the consensus established allowed for 'maximum' discretion in the expansion of hospital domains according to physician demand. For operating expenses, budgetary control was a reactive response to submitted line items. Reimbursement was essentially based on the assumed medical necessity of the items purchased and used (see below). Similarly, capital funding requests from existing hospitals and local communities wishing to establish a hospital were assessed by the HSC in terms of the assumed "medical needs" of the surrounding community. In conjunction with an abundance of resources, line-by-line budgeting meant that the yearly review of hospital expenditures and projected increases would be relatively assured.

Thirdly, the certainty in resource acquisition gained by hospital management under HDSA was accomplished by the "buffering" role performed by the DOH. Difficulties in acquiring resources prior to HDSA had been common within the hospital sector [Ontario,1934; Agnew,1974]. Indeed, it was these difficulties in funding operations and providing adequate services for the population which led to pressure for a publicly funded medical system [Taylor,1987]. By assuming responsibility for the acquisition of resources, the government would shield hospitals from adverse and varied economic conditions.

While the relative degree of "buffering" performed by the DOH remained a discretionary task, there is little indication that department officials used such discretion to any great degree. But it appears the buffering role performed by government can be attributed in large part to the expanding provincial economy during the post-war years. In other words, the possible absorption of economic fluctuations was eased by the very lack of severe disruptions within the economy.

Like most western industrialized countries, the costs of medical care in Canada escalated at a rapid pace in the 1960s. As a percentage of Gross Domestic Product, overall health care expenditures in Ontario rose from just over five percent in 1960 to 6.72 (1970) despite substantial economic

growth [Stoddart,1985; Barer and Evans,1986]. Personal health care, once a minor portion of the provincial budget, had risen to approximately thirty percent of total provincial expenditures. Of this, allocations to hospitals accounted for almost sixty percent, or 2.35% of GDP. [Stoddart,1985].

But inflationary pressure within the hospital sector was not an isolated phenomenon in government spending. That is, most spending programs had experienced rapid growth by the late 1960s and early 1970s. Perhaps conscious of their electoral claims to be "good managers" of the provincial economy, there was a shift in performance expectations by the Conservative government from improving access to services, to limiting costs through more "efficient" procedures [Ontario,1973]. Thus, the first two major initiatives invoked by the Department of Health to alter its relationship with the hospital sector were part of a government-wide action to contain program expenditures. In essence, the initiatives were intended to minimize the discretion allowed for organizational growth in the public sector.

As part of a general re-organization of the Ontario government to consolidate and co-ordinate programs and activities, the Department of Health was re-organized to a ministry structure [Ontario,1972; Ontario,1973]. The

'streamlining' of the Department of Health saw the incorporation of HSC activities and other semi-autonomous agencies within the new ministry structure. After re-organization, the processing and "analysis" of information by a semi-autonomous, external organization was eliminated and the task environment of hospitals was narrowed. Not only would policy decisions be considered the direct responsibility of the minister, negotiations for hospital allocations would take place directly between the MOH, OHA and individual hospitals.

The other major initiative was the introduction of the 'global budget;' itself a reflection of the shift to program budgeting under the Planning, Programming and Budgeting Systems (PPBS). The "bottom-up process" of line-by-line allocation had encompassed the time-consuming task of itemizing service delivery costs and projected increases to which officials would respond by searching for and obtaining the required resources [Ontario, 1974b; Ontario, 1982b]. The logic of ministry structures was to reduce the workload of day-to-day operations for high level officials and allow them the opportunity to plan strategic directions [Ontario, 1973]. Therefore, the program budget was introduced to delegate day-to-day decisions.

The organizational logic of PPBS was a "top-down" process in which program or hospital managers would be

expected to alter resources to fit objectives [Schick,1966; Ontario,1982b; Siegal,1985]. Hospitals would be allocated a percentage global increase and were expected to re-allocate funds and re-organize tasks and activities [Ontario,1970b; Ontario,1974b]. Thus, the desired time-saving and predictability for government under PPBS, transferred back to the hospitals the uncertainty and instability of handling resource demands from within.

In 1969, the DOH implemented the 'global budget' as the new funding mechanism for hospitals. The global budget consisted of two components. 'Part A' of the budget would set institutional allocations based on a percentage increase for all hospitals. The percentage increases would reflect negotiated departmental forecasts of projected rises in the cost of wages, fuel and other inputs considered essential for the maintenance of services [Ontario,1970b; Detsky et al, 1983; Glaser,1987; Ontario,1989b]. Introduced in 1977, 'Part B' of the budget was for the funding of new services and programs. Despite revisions, the global budget process consisted of a relatively stable framework that was not substantially altered for the next decade. Therefore, the description here will refer to the time period of the late seventies.

As a funding agency, the MOH is dependent on acquiring sufficient resources in order to perform its tasks. As part of a larger organizational structure - the Government of Ontario - the ministry relies on the willingness and ability of government to obtain and allocate fiscal resources. Therefore, MOH demands must be balanced with the revenue collection policies of the government and competing claims from other spending programs.

Accordingly, the funding process for hospitals was linked to the provincial financial management system and was much like regular departmental budgetary processes [Ontario, 1982a; Brown-John et al, 1988]. At the same time, the process consisted of two simultaneous levels of negotiation: i) cabinet allocations to each policy sector and, ii) the distribution of institutional allocations.

Shortly into the fiscal year, work would commence on the following year's provincial budget. The Treasury would first project the revenues the government could expect to receive in the next fiscal period. It would be the responsibility of the Management Board to ask the various ministries to prepare estimates of projected expenditures for both the maintenance of existing services and new/expanded programs. Upon receipt of this information, the Management Board would develop an expenditure forecast. Ministry proposals for spending were submitted for review

and approval by the Cabinet Committee on Social Development, and the Policy and Priorities Board [Loreto,1985]. These recommendations would then be ^{complied} complied by the Cabinet Office, Treasury and Management Board and a "Planning Summary" would be sent to Cabinet. Ministry claims and counter-claims would be reviewed, particularly those expenditures that exceeded incremental adjustments. By October or November, Cabinet would approve the provincial budget expenditures in principle. At this stage of the process, policy field allocations would be recommended.

Simultaneously, the MOH's Institutional Operations Branch and Fiscal Resource Branch would be negotiating the sectoral formula used to establish individual hospitals' global budgets (or Net Ministry Liability). The formula consisted of three major components [Ontario,1970b]. The first component consisted of changes in admissions and days of care. Admissions would be compared with current and previous years, and full credit would be given for the number of patient days increased because admissions increased. The second and third components consisted of increased department costs for supplies and salaries. In combination, these cost increases were calculated by ministry officials to define the level of inflation.¹

In late January, the hospitals would receive a form letter containing financial guidelines for projecting their

costs. Hospital managers would prepare a twenty-five page, line-by-line prospective budget to be scrutinized by the Fiscal Resource Branch and Institutional Operations Branch [Glaser,1987]. Each prospective budget would be compared to the previous year's budget by Institutional Operations officials. Deviations or excesses from the previous years budget would be the main topic of analysis. Analysis of any such deviations essentially consisted of contacting the hospital to discuss the identified "problems" [Glaser,1987]. On the basis of the discussion and further review, a decision would be made as to the legitimacy of a change in spending.

Capital funding under global budgeting differed little from that of line-by-line in that there was no clear formula. Instead, hospital managers would submit a proposal outlining the need for equipment or expansion and a projection of operating costs. The proposal would be scrutinized by the MOH in relation to available ministry funds. Though sometimes marked by intense negotiations, approval would usually be given to the project if the surrounding community could raise the additional funds (from 50 to 75%) necessary for expansion. As with the global budget, ministry officials were reluctant to question the "medical judgement" of the relevant physicians and hospital management [Glaser,1987].

On April 1, the provincial budget would be released and hospitals would be notified of their own budgets, though it was not uncommon for budget negotiations to extend beyond the start of the fiscal period, or for changes to be made mid-year due to changes in economic forecasts [Glaser,1987]. In addition, an appeal mechanism existed for hospitals to contest allocations. The appeal committee consisting of the Director of Institutional Operations, three members of the hospital's area team, and a financial advisor from the Fiscal Resource Branch would re-assess hospital claims for increases in the budget [Glaser,1987]. If the hospital failed to win the judgement, there remained an opportunity to appeal directly to the minister and/or Management Board. Failing this appeal, hospital managers were expected to conform to the spending limits imposed under the budget through whatever means available without harming the quality of care.

In essence, the re-organization of the Ministry of Health and introduction of PPBS altered the task environment of Ontario hospitals. That is, each contributed to a new external policy framework through which future environmental fluctuations would be channelled from the top to bottom. Prior to 1969, the domain consensus or "negotiated environment" of Ontario hospitals environment had been relatively flexible to meet claimed institutional and

physician needs. Under line-by-line budgeting, costs were assumed to reflect need and constraints on the expansion of hospital domains had been relatively weak.

With the elimination of the HSC and the creation of the program (or 'global') budget, the "bottom-up" process of resource allocation was altered. The perceived inefficiency of hospital operations would no longer be "buffered" through an assurance of relatively abundant fiscal resources, but rather, hospitals would be expected to better manage allocated funds. Moreover, there was an apparent change in MOH policy from a large scale expansion of hospital domains to that of limited growth or contraction. Rather than assuming an implicit 'cost equals need' calculus, hospitals were expected to justify projected needs and remain within the awarded limits. In essence, the MOH introduced a budgetary system which would permit stronger bureaucratic discretion in resource allocation, and require hospitals to react and adapt to the imposed fiscal conditions.

Shaping the Environment: Organizational Devices for Competitive and Cooperative Strategies -- The Ontario Hospital Association and Hospital Medical Records Institute

As was stated in Chapter Two, Thompson did not specify through what mechanisms competitive and cooperative

strategies would be applied. Rather, he provided categories in which these mechanisms could be placed and described. On this basis, we suggested that Coleman's [1985] typology of interest group activity closely paralleled Thompson's categories. Coleman [1985] notes that there are a number of distinct characteristics which are related to the role played by each organization. In describing advocacy groups, the author claims the group will attempt to affect policy decisions by using influence. More importantly, this influence will be enhanced by the its level of political support (or prestige), the amount of relevant information it can supply to the government, and pledges of political support. All of these organizational attributes are consistent with Thompson's description of a competitive strategy.

Established in 1924, the Ontario Hospital Association operates as an external coalition of high level officers from Ontario hospitals. The Association is governed by a 46-member Board of Directors consisting of hospital trustees and chief executive officers. Accordingly, the OHA assists individual hospitals in what have been described as key organizational tasks. First and foremost is the acquisition of sufficient fiscal resources [McNab,1982; Ingram,1983]. Second, the OHA seeks to acquire and maintain a high level of political support by legitimating the activities

performed by hospitals, and the Association itself [McNab,1982; Ingram,1983]. And finally, the OHA provides information to hospital managers and MOH officials on how to manage the allocation and coordination of hospital resources [Ontario Hospital Association,1970-86].

To manage these organizational tasks, the OHA is divided into divisions which take an active role in certain aspects of hospital operations, collect and distribute managerial information, and assist hospitals in their efforts to secure funding. The "hands on" operational programs include the central purchase of supplies, Health Care Occupational Health and Safety, and central bargaining with the major unions operating in the hospital sector. That is, the Association offers assistance in securing certain non-fiscal resources essential to hospital operations. In addition, the OHA operates educational services to expand and upgrade the managerial skills of hospital staff members.

The management of information is divided into two distinct sections. The first is related to the collection, analysis and distribution of information related to the management of public hospitals. The range of this information encompasses fund-raising, hospital governance and by-laws, planning, safety, public relations, quality assurance and managerial procedures for professional

services. To accommodate this process, the OHA sponsors conferences on issues related to hospital services and related health care matters. For these, the Association invites what it considers to be relevant participants such as health care professionals and/or their associations, other interest groups and government officials.

While the purpose of such conferences appears to be educational in orientation, these initiatives also seem to further legitimate and maintain the role the Association plays in matters of health care. The cooperative nature of these activities seem to coincide with Fulton and Stanbury's [1985] description of the British Columbia Health Association. That is, the OHA relies less on making public its disagreements and more on "quiet diplomacy." Moreover, the approach allows the Association to build and mobilize political support from a more diverse set of interests than just other hospitals.

The other aspect of information collection performed by the OHA is directly related to the more competitive technique of lobbying the MOH for fiscal resources. In doing so, the OHA collects information and forecasts its own projections of hospital costs, patient growth and future needs for expansion. Similarly, the data is separated according to increases needed for maintenance of current services, and those related to discretionary, capital

expenditures. As suggested by Fulton and Stanbury's [1985] analysis, the type of information seems to be related to the entire population of Ontario hospitals rather than specific institutional needs. Like the BC Health Association, the OHA does not negotiate directly on behalf of individual hospitals, but rather, the Association attempts to affect the amount of allocation for all hospital services. That is, the larger the total volume of Ministry allocations to the hospital sector, the greater the likelihood hospitals will receive their preferred level of allocation. Conversely, the smaller the allocation, the greater the likelihood of inter-organizational competition, conflict and inequity.

With reductions or limits on the MOH's own program budget, OHA lobbying must concentrate on the ministry to ensure that hospital spending is not unduly affected. How the MOH deals with the OHA input is not clear. Nevertheless, the OHA maintains a capacity to generate and analyze information, and an ability to scrutinize ministry calculations. That discussions and negotiations are conducted between each is obvious. Though only conjecture, it seems reasonable to presume ministry officials will keep in mind the degree of discrepancy which might exist between their calculations and OHA figures.

The key for the OHA would appear to be not only the capacity to mobilize political support, but the willingness to do so. Prior to 1977, the need to resort to organized advocacy campaigns through the media did not appear necessary. While the OHA did release position papers and make public statements, these efforts were primarily limited to the annual OHA conference and more ad hoc committee settings [McNab, 1982; Ingram, 1983]. Instead, they focused their efforts on "behind the door" discussions of how calculations should be made with respect to projected increases in spending.

Without elaborating at this point, it would be the OHA's willingness to partially abandon its more co-operative or diplomatic approach which changed in the early 1980s (see Chapter Six). Conversely, the need to play a stronger advocacy role by the OHA was parallel to the growth of another inter-organizational device - the Hospital Medical Records Institute. Whereas the OHA is an external coalition of senior hospital officials attempting to represent institutional interests, the HMRI board is composed of senior officials from the OHA, OMA, MOH and Ontario Health Record Association. The role of the HMRI is to participate in the design and implementation of hospital performance

measurement systems. As such, the HMRI is characteristic of Coleman's [1985] description of a participatory interest group.

Coleman suggests these characteristics would be distinguished by two levels of behaviour: the formulation and implementation of policy. In policy formulation, the group would be actively involved in developing the guiding principles and actual text. Similarly, the same group would be responsible for the actual implementation and administration of the policy, with the capacity to enforce compliance. To do so, the group would require a high level of expertise to coordinate complex information and activities.

Formed in 1963 as a non-profit company providing computer services and statistical reports for hospitals, the HMRI by the 1970s had been transformed into an agency providing operational information to both hospitals and the MOH [Suttie et al, 1980]. The original objective of the HMRI had been "to assist physicians and hospitals in the evaluation of quality of care." Essentially this meant assisting hospitals in the development of consistent methods of recording and reporting medical data. By the 1980s, the stated objectives of the HMRI were far more diverse and sophisticated. The primary objectives included:

1. Assistance for the performance of internal review in the quality of hospital care

2. Providing health care data to facilitate planning by both hospitals and the Ministry of Health
3. Assisting the MOH in "processing health care entitlements"
4. Reviewing the Utilization of Resources data base
5. Providing a base of health data to supplement and complement financial data
6. To develop a data base and comparative methods for ambulatory care

[Ontario,1980]

Like the Hospital Services Commission (1956-1972), the HMRI is neither a ministry or hospital agency. Instead, it constitutes a combination of hospital service interests. But unlike the HSC, the HMRI does not analyze the provided data (unless asked to do so on a consulting basis) or make decisions related to levels of funding [Suttie et al,1980]. The HMRI's relevance to the funding of hospitals is linked to how it reports information on hospital performance. That is, the HMRI functions as an agency which standardizes information for comparison, and develops formula measures of operational performance.

By extension, how this information is reported is increasingly utilized in the inter-organizational negotiation and design of hospital funding formulae [Hospital Highlights,1979; Ontario,1980; Suttie et al,1980]. Prior to the re-organization of the MOH, the Hospital

Services Commission had been responsible for compiling and analyzing hospital statistics for hospital reimbursement. The need to create another "neutral" or non-ministry agency for the purposes of data collection seems clear. As suggested by Jeanne Bickle, current Vice President of the HMRI, the agency is "the unbiased manager and guardian" of hospital data [Ontario,1989b]. Its responsibility is "to ensure the integrity of data" [Ontario,1989b]. Accordingly, every August as the MOH prepares its estimates for Cabinet approval, the HMRI is requested to provide the necessary data. The net result of this perceived 'neutrality' is that the HMRI serves to stabilize inter-organizational relationships through cooperation.

While the HMRI does not have the power to make funding decisions on the basis of the provided data, how it "manages" the data is of no less relevance to hospitals and the ministry alike. Changes in hospital performance measurement had become increasingly complex prior to 1977. Traditionally the benchmark or guideline for reimbursement was the number of hospitals beds available and occupied [Ontario,1989b]. The lack of detail included by this indicator would appear to be related to the method of retrospective, line-by-line expenditure submissions. The need for quantitative data on patient care to predict adequate hospital budgets was not necessary because the

actual costs submitted at years end were usually assumed to be appropriate.

With the change to PPBS and prospective budgeting, it became necessary to more carefully consider distinctions in the type of data provided. Acting on the recommendations of the HSC, the relevant indicator for reimbursement was changed from the number of beds to the number of in-patient days [see above]. Essentially, changes in the number of in-patient days because of projected increases in admissions rather than length-of-stay was considered an appropriate cause for growth. Inflation would be projected and negotiated by the MOH and OHA. But by the late 1970s, this method of prospective reimbursement was criticized. In particular, hospitals claimed the degree of discretion the MOH possessed in adjusting in-patient figures and inflation was inappropriate [Milne,1984]. In addition, hospital association and trade journals were filled with claims that the crude indicator of in-patient days failed to take into account different services and case mixes. The problem was not merely convincing the MOH of the need for change, but also the lack of adequate utilization data to generate the appropriate alterations in reimbursement.

Accordingly, the HMRI executive created the "Redesign Steering Committee" in 1976 to reconsider how hospital data was reported and analyzed. According to Suttie et al.

[1980], the perceived need was for a system of reporting which would facilitate the review of resource utilization and future means of reimbursement. The outcome was a change in the total information to be collected, and how this information would be combined and compared. Under 'System 78', an abstract was developed to include coded information regarding the patients' age, sex, admission and discharge rates and data concerning diagnoses, procedures, services, attending physicians, therapy and the usage of any special care units. Thereafter, the information would be broken down into a discharge analysis; an indexes including diagnosis, procedure and physician and, most importantly, length of stay reports incorporating the entire hospital, patient and physician service, and diagnosis grouping (by both procedure and physician) [Hospital Highlights, 1979].

All hospitals were required to implement 'System 78' and accurately report on their activities. In return, they would receive monthly, quarterly and annual reports on their and other hospital activities. How they would use this information was optional. As will be discussed in the next chapter, it appears the relevance of HMRI data for internal review is severely limited in most hospitals. A survey of hospital administrators and physicians found that few

members used or even understood how to use HMRI reports to alter current medical activities [Suttie et al,1980].

As will also be argued in the following chapter, the change in data collection made with 'System 78' had a direct link with subsequent negotiations on a new method of reimbursing hospitals. With the implementation of this system by the HMRI, hospitals would have 'better' information on how and how often they provided services. More importantly, this information would be standardized and implemented in a cooperative, inter-organizational setting.

ENDNOTES

1. For a more detailed description of the perceived problems with this formula see Chapter Six, pp. 124 and 127.

CHAPTER FIVE

ORGANIZATIONAL DESIGN

In this chapter the internal design of Ontario hospitals will be described. Based on Thompson's conceptual description of organizations, we shall consider how the institutional, administrative and technical levels are linked and ordered in the delivery of medical services. Two particular aspects of hospital design shall receive extensive consideration. The first is the effect of an uncertain and unstable medical technology on administrative and medical tasks. That is, how hospitals delegate authority and control in the performance of "core" medical activities. The second aspect to be considered is what other tasks the administrative component performs to "mediate" between hospitals' internal order and environment. In essence, we shall examine what 'flexibility' administrators have in using this form of "mediation," and how this affects the capacity for adaptation in response to changing environmental demands.

Organizational Structure

Under provincial law, all public hospitals in Ontario must have a governing Board of Trustees, a chief administrator and a medical staff [Ontario, 1970, 1980]. The same legislation requires that these roles be assigned specific responsibilities and duties through hospital by-laws. Yet despite the distinctions made between these hospital roles there is an overlap in responsibilities.

As described in the Public Hospitals Act (1970, 1980), the Board of Trustees is a voluntary body of community figures responsible for all actions taken within the hospital. Such a broad legal mandate includes any and all actions related to the quality of medical care and the financial well-being of the institution. Since the mandate is beyond the expertise and physical capabilities of the hospital boards, the Public Hospital Act requires that the board establish operational by-laws, delegate administrative and medical tasks to appointed officials, and monitor the actions of those chosen to handle day-to-day operations. The delegation of these respective tasks are contained within the office of the Executive Director and the medical staff.

The Executive Director is responsible for ensuring that not only are resources provided in a timely and appropriate

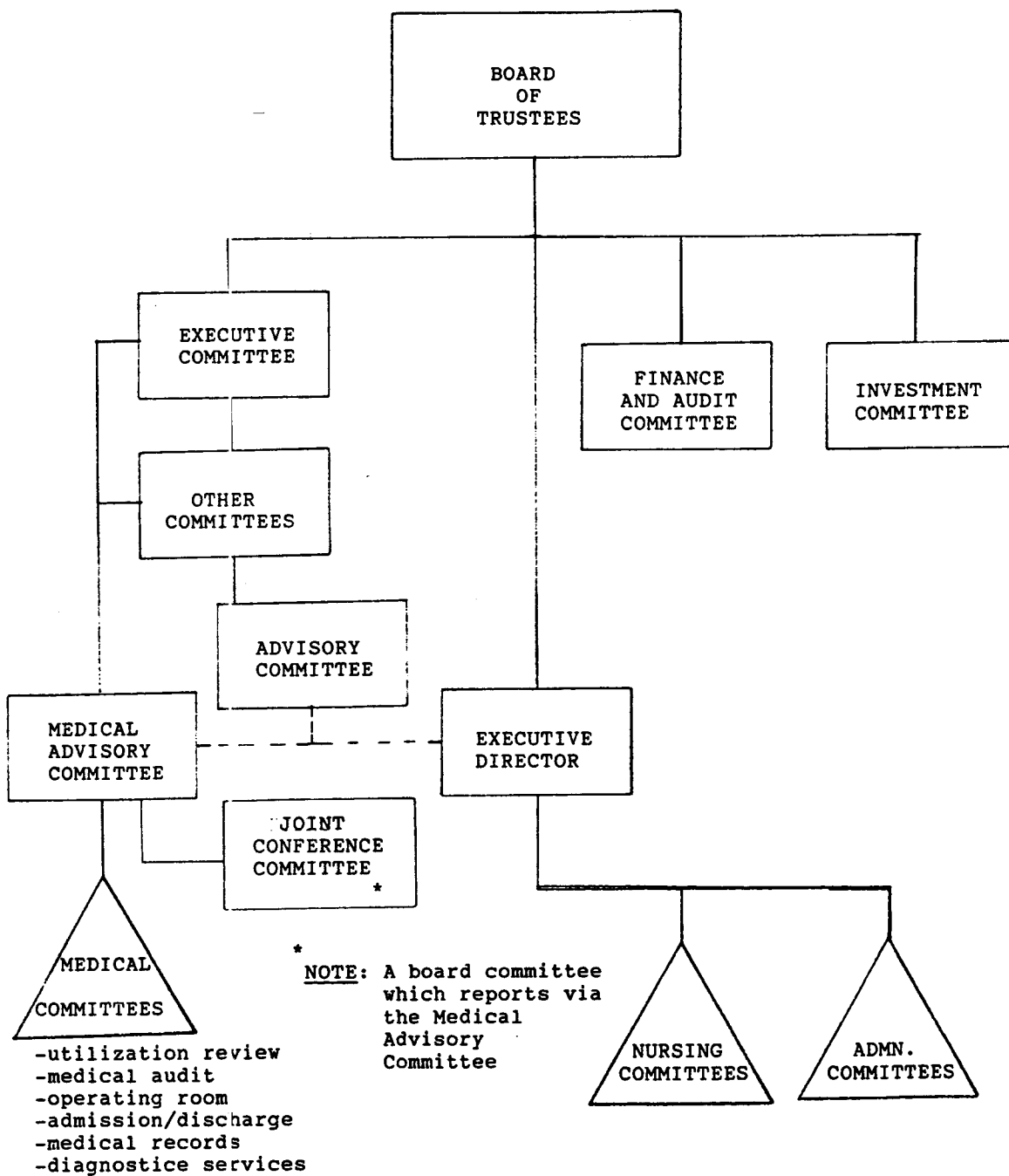
manner to meet medical demand, but that operating expenditures do not exceed financial inputs. In turn, the medical staff is responsible for ensuring that diagnoses and treatments are being performed according to professional norms and current medical knowledge.

Though the hospital board delegates responsibility for day-to-day operations, it remains an active body with regard to monitoring these activities by collecting and reviewing reports usually received through medical committees. To manage the amount of information which has to be collected, hospital boards establish specialized committees which will co-ordinate the collection and review of reports. Similarly, to accommodate the overlapping board responsibilities for co-ordination, performance and surveillance, a network of board committees are established. Consisting of a mixture of trustees, administrators and medical staff, these committees mediate between the so-called "triangular" relationship and connect decision making across hospital sub-systems (See Figure 5.1).

Performing the task of information and committee co-ordination is usually done by an Executive Committee of the Board [Milne, 1976]. The Executive Committee essentially functions as the board-in-standing. Whereas the governing board usually meets on an intermittent basis, the Executive

FIGURE 5.1

HOSPITAL COMMITTEE STRUCTURE



Committee is more likely to convene regularly to receive and review other committee reports before forwarding them to the Board [Milne,1976; Ontario,1983a].

The committee reports received are typically related to patient care, program operations and planning, finance and investment concerns. While there is little empirical data to support the contention, it seems reasonable to presume these board committees are expected to become conversant in the language and knowledge of the specialized area of hospital activities and recommend to the board the appropriate decisions [Ontario,1983a]. Nevertheless, it appears the onus of information collection, "analysis" and decision making is dependent on the reliability of the non-board medical committees [Milne,1976].

Two notable exceptions to board of director reliance on medical committees are the finance and investment committees. For these two committees, the accumulated financial, legal and business experience of the majority of Board members is used to manage their respective hospitals' external financial relationships and acquire charitable donations for capital expenditures [Eakin,1984; Ornstein,1986]. In essence, these committees allow the board to perform what others have claimed to be the trustees' essential organizational role: the public legitimization and acceptance of the local hospital in

return for financial support [Parsons,1960; Perrow,1961,1965; Ontario,1981a; Eakin,1984]. Otherwise, the network of board committees tend serve as clearing-houses for activities related to medical care rather than "administrative" matters (see below).

One such committee is the Joint Conference Committee which is required under Canadian hospital accreditation guidelines. The significance of this committee may well be the lack of explicit criteria as to its mandate. The committee serves as a mechanism to allow for discussion of current concerns with day-to-day operations several times over the course of the year [Ontario,1981a; Galloway,1981; Ontario,1983a; Leatt et al.,1987a; Ontario,1988]. Significantly, the membership of this committee is composed of not only key board members, but also senior administrative and medical staff [Ontario,1981a; Ontario,1983a; Leatt et al,1987a; Ontario,1988]. Therefore, it appears the Joint Conference Committee serves as one locale of conflict resolution.

Yet what is a board committee, reports through a non-board apparatus - the Medical Advisory Committee. The Medical Advisory Committee (MAC) is the central linkage between the hospital board and its sub-committees and the medical staff. Required under provincial law, the Medical

Advisory Committee (MAC) makes recommendations to the board concerning:

- i. every application for appointment or reappointment to the medical staff or the dental staff, where there is a dental staff
- ii. the hospital privileges to be granted to each member of the medical staff
- iii. the hospital privileges to be granted to each member of the dental staff, where there is a dental staff
- iv. by-laws respecting the medical staff and the dental staff, where there is a dental staff
- v. rules respecting the medical staff and the dental staff, where there is a dental staff
- vi. the dismissal, suspension or restriction of hospital privileges of any member of the medical staff or dental staff who contravenes any provisions of the by-laws, the Public Hospital Act, the Health Insurance Act, or the regulations made under those acts, and
- vii. the quality of medical care provided in the hospital

[Ontario, 1970, 1980]

In order to advise and assist Department chiefs on the co-ordination and supervision of clinical activities, the MAC institutes a varied number of committees to collect and review information related to medical care. In turn, the MAC and/or its committees are expected to report on its activities or recommend proposals at the request of the Board. As might be expected, the greater the number of clinical specialties and activities, the greater the number

of committees reporting to the MAC.¹ Some typical examples of medical committees are:

- a Credentials committee for the appointment of medical and dental staff and for the delineation of clinical privileges
- a Medical Record committee for evaluating the quality of medical records
- a Tissues and Medical Audit committee for reviewing tissue removed at surgical operations and for auditing the quality of medical care
- a Operating Room committee for assisting in the scheduling of surgical schedules and procedures
- an Education committee to organize a program of continuing medical/dental education for staff
- a Utilization committee to review the use of hospital resources and facilities for good patient care

[Galloway, 1981]

Similarly, the MAC is responsible for informing the Executive Director and Director of Nursing on those medical and surgical techniques considered professionally acceptable. By extension, the MAC provides advice to the Executive Director on those administrative matters which may have a direct impact on the delivery of medical care. In essence, the MAC is the primary organizational body providing both information and advise to the hospital board and executive director on how medical care in the hospital setting is to be conducted.

The composition of the MAC varies from hospital to hospital, but invariably encompasses a heavy concentration

of medical staff rather than other organizational members. Moreover, the inclusion of non-medical staff does not automatically consign an active role in MAC decisions as indicated by voting privileges. As reported by Leatt et al [1987a], MAC members are usually the Chief of Medical Staff, the President of Medical staff and selected physicians. In addition, some hospitals include the executive director, other senior administrators and the Director of Nursing. But whereas the majority of physicians possess voting rights, Leatt reports that as few as twenty-three percent and nine percent of executive directors and nursing directors hold similar decision making power. In conclusion, it appears some MAC members are included for the purposes of consultation rather than decision making.

The MAC and Chief of Staff are relatively inactive in monitoring or advising department chiefs on the delivery of clinical services [Ontario, 1970b; Milne, 1976; Ontario, 1983a]. Instead, each chief is allowed a great deal of discretion as to what procedures and techniques should be instituted on a daily basis. Despite the requirement for medical audits, and the emergence of Utilization committees, there is no compelling evidence that these bodies have reduced the amount of discretion allotted department chiefs and individual physicians.

On the basis of their survey of twenty Ontario hospitals, Suttie et al. [1980] found that 83% of Utilization Committee members saw their role as that of "monitoring" physician activities rather than making and enforcing guidelines. A partial explanation may be that these committees see their role as one of professional rather than corporate responsibility [Lomas and Barer, 1986]. If such is the case, then physician action is judged by acceptable practice according to loose professional norms rather than a careful selection of the least costly technique(s).

Such inactivity can be further explained by three observations made with regard to physician behaviour. Contained within each medical department are a number of clinical specialties. Within these specialties, it is presumed that those physicians diagnosing and treating patients are more competent in this field than other physicians [Lomas and Barer, 1986]. By extension, the presumption of competency is reinforced by the notion that individual physicians must be allotted substantial autonomy as to the appropriate clinical decision [Milne, 1976; Moore, 1981]. Since the uncertainty of diagnosis and treatment is perceived to hinder the routinization or standardization of procedures, professional education and

loose norms serve as the boundaries of discretion [Lomas and Barer, 1986].

Finally, the majority of physicians delivering care to patients are not usually "members" of the hospital staff, but rather, are granted "privileges" to use hospital facilities and staff for their personal patients. That is, physicians form an implicit contract with the MAC to supply the hospital with their patients in return for their labour. But the terms of the so-called 'contract' are made according to professional norms. In other words, physician responsibility is for the individual patient, not the use of resources.

The role of the MAC and its medical committees are consistent with Perrow's [1961] description of a "parallel bureaucracy." But rather than being "parallel" in the sense of being analogous, the additional line of authority encompasses the professional activities of physicians rather than all organizational activities. That is, the parallel appearance is evident in relation to "core medical" tasks. By retaining the authority to monitor physicians, the MAC serves as an internal vehicle to monitor (and in all likelihood, preserve) professional autonomy in clinical decision making.

Similarly, the allowance for physician 'autonomy' between medical professionals and administrators, and

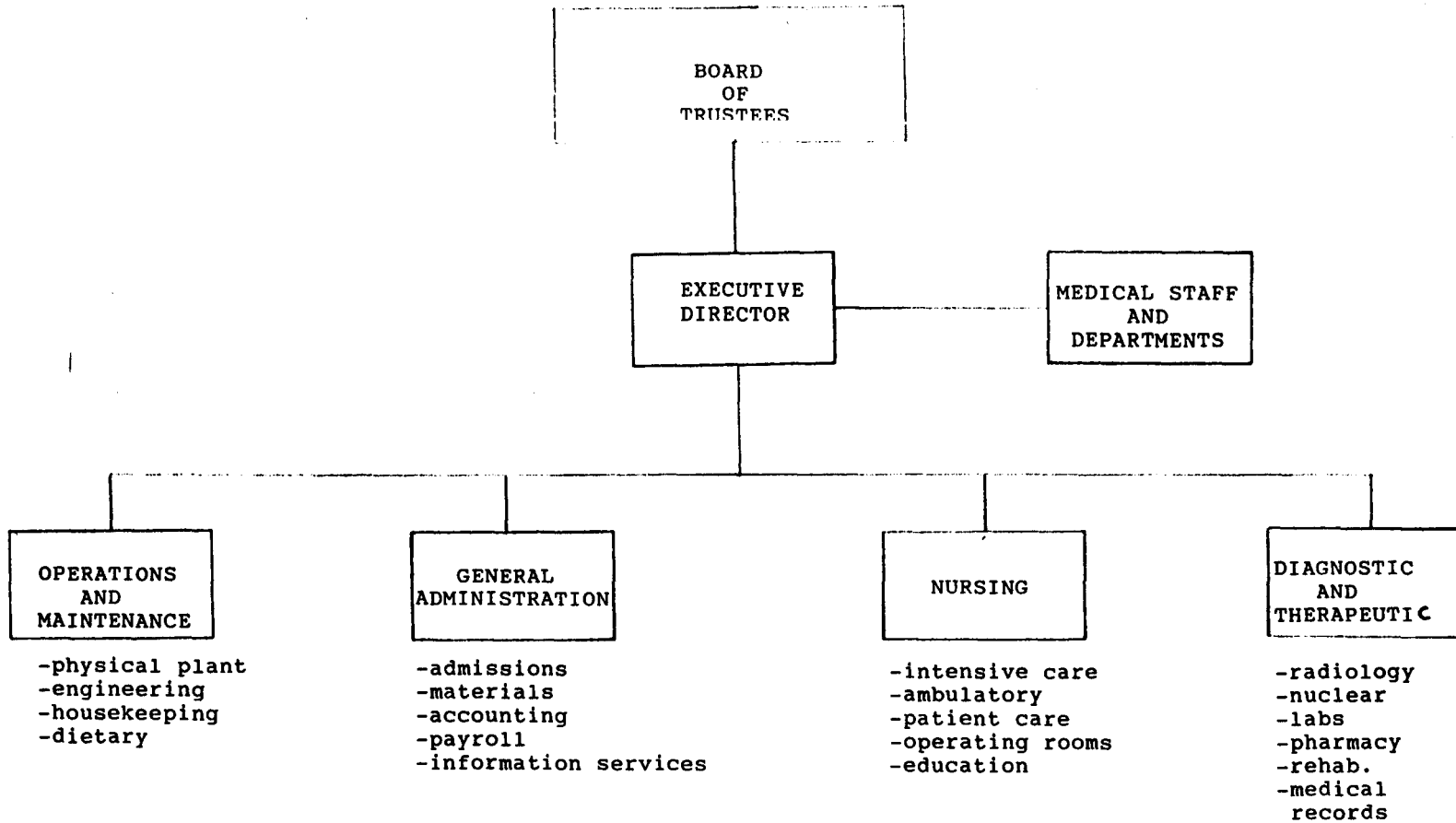
between professionals means the "bureaucracy" is incomplete. That is, the hierarchy implied by official designations of authority is limited mostly to the managing of physician competition for bedspace rather than their activities. And while there exists the possibility of sanction through the withdrawal of hospital privileges, or an implicit restriction on bed allocations, there is no evidence these are applied according to written rules.

Though scrutiny and control of medical care is protected via the Medical Advisory Committee and its network of sub-committees, the administrative component reports "directly" to the Board of Trustees on departmental allocations and co-ordination. The administrative structure is typically distinguished by two distinct components (See Figure 5.2). The first component is organized around four major departments: Nursing, Diagnostic and Therapeutic Services, Administration and Supporting Services and Education [Auer, 1984]. Within each department are a series of specialized service areas or departments.

The second component is the clinical departmentalization of physician care. What departments are created depend on the type and range of clinical services offered by physicians within the respective institution. The most common departments are: Medicine, Surgery, Anaesthesia, Radiology, Obstetrics, Pathology, and

FIGURE 5.2

HOSPITAL DEPARTMENTAL STRUCTURE



Psychiatry. In turn, these departments are divided into divisions and sections based upon specialized areas of clinical expertise.

The separation of non-physician and physician services creates two administrative reporting lines. The departments of nursing, diagnostic (technicians) and therapeutics and so on constitute a supporting network of human and capital resources complementing medical treatment. Coordinating activities and distributing resources between the service areas/departments are assistant administrators accountable to the executive director. The expectation is for the administration to laterally co-ordinate the distribution of resources in support of medical treatment and to resolve inter-departmental disputes.

While departments such as nursing are under the direct authority of the executive director, this does not imply that the administration can directly control costs. In their study of cost containment in American hospitals, Ruchlin and Rosen [1980] suggest a further distinction must be made between what they refer to as "routine care" costs and "ancillary" costs. Routine care costs refer to services such as dietary, housekeeping and nursing which are traditionally seen as being subject to administrative control. Ancillary costs such as diagnostic and therapeutic services are perceived to be more closely connected to the

hospital medical staff. Whereas with routine care costs the administration is allowed to directly intervene in servicing, the professional norms of physicians are seen to limit the degree of intervention in ancillary services.

The differences are believed to be related to the connection between non-physician services and clinical decision making [Ruchlin and Rosen,1980]. For diagnostic services there is a direct link with physician decision making. Upon admission to hospital, what diagnostic techniques are to be used is determined by physicians. That is, diagnostic services must respond to physician demand.

In the case of therapeutic services the link is less clear. While the health care professionals in these services provide acute-rehabilitation to patients admitted by physicians, the assortment of treatments are more contingent on the therapists' decisions and subject to each disciplines' norms. As with physicians, it is expected that administrators not violate these norms by intervening in how such assessments and treatments are carried out.

Conversely, "non-core" activities such as housekeeping and maintenance have no direct link to physician decision making. These are organizational tasks believed to be necessary to support "core medical" tasks, yet not related to the actual provision of care. But the inclusion of

nursing within the category of routine costs is more problematic. While some elements of care may not be directly related to medical services, other elements such as the application of medication or monitoring vital signs are essential activities in maintaining the well-being of patients. Therefore, it would appear that some portion of nursing activities may be peripheral to "core" medical activities and perhaps discretionary, whereas other activities are less 'flexible.' The net result is that there may be only some elements of nursing care which are "routine" and subject to direct administrative intervention.

In contrast to non-physician departments, clinical specialties provide an organizational framework which allows the physician to diagnose and provide treatment on the basis of their professional and practical experience. Medical department chiefs are appointed by the MAC (with the approval of the Board) and are primarily accountable to the same committee for their actions. While the Chief of Staff and department chiefs report to the executive director, administrative controls on clinical department decisions cannot be applied without violating the self-regulatory status of physician autonomy. If the executive director or other senior administrators have a complaint regarding the activities of a physician, the matter must be referred to

the MAC. The application of penalties is the responsibility of the MAC or the College of Physicians and Surgeons [Home and Lynch,1981]. As a result, the reporting relationship is unclear.

According to MOH estimates, the structural design of hospitals means that administrators directly control only 10 to 40% of hospital costs, while physician decisions directly affect 60 to 90% [Hospital Highlights,1977]. Similar estimates in both Canada and the U.S. suggest a more precise figure is 70 to 75% [Hospital Highlights,1977; Relman,1980]. But regardless of the varied range, the most conservative estimate suggests that at least 60% of hospital expenditures cannot be directly controlled by hospital administrators due to structural arrangements, legislation and informal norms.

Decisions on allocations may be affected in two ways. One is through the Advisory Committee. The non-board Advisory Committee is usually composed of the executive director, Chairman of the Medical Advisory Committee, other senior administrative staff, and a small number of medical staff. Essentially, the Committee serves as a possible decision making forum in resource allocation by acting as a link between the administration, clinical departments/divisions and the hospital board. But despite the existence of the Advisory Committee, its role seems to

be related more often to discretionary department/program expansion [Ontario,1983a; Leatt et al,1987a].

The other way administrators may attempt to affect allocations is through the volume of resources (staffing, beds, diagnostic services) made available. By limiting patient access, clinical services must adjust by competing for available bed space, operating room time, and diagnostic and therapeutic services to maximize discretionary admissions per service. While there has been little research into the informal process of budgetary allocation, the formal procedure tends to reinforce the division between the administration, medical support staff and clinical services. On the basis of the previous years service volumes, each department head is asked to project expected increases. At this point, the department heads are excluded from the formal process of determining actual allocations. Instead, the estimates are examined by the executive director, financial staff and assistant administrators and adjusted to "fit" actual MOH allocations [Murray,1976; Milne,1976,1984].

While the capacity to severely restrict access rests within the extent of administrative control, the usage is obviously conflictual and subject to challenge. Therefore,

administrators are inclined to resist this course by seeking other types of savings, or by finding ways of maximizing the use of fewer resources through "smoothing" and "forecasting" techniques. As a result, the closing of beds does not necessarily translate into reduced services.

While the implementation of the global budget was believed to reduce the need for tracking specific costs by administrators, it appears that this role continues to comprise a large proportion of administrative resources [Glazer, 1987]. Traditionally, the task of assembling information on hospital activities was done in two separate ways [Gillespie, 1978]. One was the recording and compiling of medical records on all treatments provided to patients. The other was the collection of operating costs from each department. With the growth and development of HMRI systems, medical records and financial data have increasingly been compiled together in an attempt to detail the specific costs of individual patient care.

Though the collection of such data has been considered as being relevant for internal purposes such as resource re-allocation and schedule adjustments, there is some evidence that such uses are limited in application. According to Suttie et al [1980], only 34% of hospital administrators and department directors and chiefs scrutinize this data on a

regular basis. The range of such scrutiny varied from 5% of Laboratory Directors to 65% of Medical Records Directors. While 69% of these members believed the information to be relevant for utilization review, only 30% of committee chairmen understood how to use this information. Furthermore, only 69% of physicians understood how such data was relevant in their use of hospital resources.

Though there appears to be limited use of HMRI data for the purposes of internal re-allocation and procedural changes, the same information does seem to have a greater relevance for hospital appeals on budgetary allocations. From this information, hospital administrators are expected to construct valid indicators of increased activities in relation to previous workloads and similar types of hospitals. On this basis, the treasurer and his financial department attempt to build a case validating their claims for increased reimbursement.

The net result is despite the compilation of medical and financial data, the relevance of the information varies between the administrative and medical lines. Moreover, there is no apparent evidence the data is used by administrators to re-allocate funds, or that physicians use it to manage and change their behaviour. A logical conclusion is that HMRI data is a regulatory requirement that has more importance for communicating and negotiating

with the Ministry of Health, than internal changes to how activities are structured and performed.

Summary

In sum, the "triangular" relationship between the board, executive director and medical staff is maintained by the dual reporting and committee systems present in general hospitals. Since there is no clear merging or coalition of administrative and medical members as a managerial group, each functions in a relatively autonomous fashion at times. The design of this system serves to protect and promote physician autonomy in clinical decision making as to what treatment should be provided, and their influence on what resources are required. There is no compelling evidence that department chiefs manage the activities of other physicians. In turn, the administrative component tends to make budgetary decisions in isolation from both non-physician and clinical departments. Yet there is no evidence to suggest administrators intervene and "manage" physician and non-physician departments, with the exception of routine care services. Instead, the power of allocation seems to be the means of controlling professional services.

The uncertainty and unstable nature of medical technology hinders the development of routine procedures and constrains the development of strict criteria as to appropriate outcomes. Rather, hospitals utilize a process measurement of achievement which is directly related to current professional norms as to the appropriate procedures. Because physicians are essential to hospital operations, the dependency established allots medical practitioners some influence and power in allocation.

As suggested by Ruchlin and Rosen [1980], the control administrators have over "non-core" services makes it likely that changes are most likely to affect these areas of operations. Moreover, in that some elements of nursing are directly related to medical care, it is likely administrators will seek the most 'savings' in support services such as housekeeping and maintenance. That is, medical care will be "buffered" from financial limitations and uncertainty.

Nevertheless, the one area of non-core activities not expected to suffer financial cutbacks (or at least a reduced effect) will be administrative and record keeping tasks. Instead, the collection of information will be intensified and expanded in direct response to fiscal scarcity. That is, the need to communicate with the MOH requires that more

resources be used to deal with the perceived "organizational problem" of resource acquisition.

ENDNOTES

1. This conclusion has been reached by linking two empirical observations related to the organization of the general hospitals. First is that there appears to be strong correlation between the size of the institution and the degree of division of labour or specialization [Heydebrand,1973]. Similarly, Leatt et al. [1987b] observe that the number of medical committees appear to increase with the size of the hospital. Therefore, it seems reasonable to presume specialization and size both affect the number of committees established as the volume and complexity of hospital activities increase.

CHAPTER SIX

ADMINISTRATIVE RESPONSES TO FISCAL RESTRAINT

In this chapter we consider the administrative responses to fiscal restraint starting in 1977. Our 'model' of organizational adaptation based upon Thompson contains a number of predictions. The first is an initial stage of "buffering" in which the administrative component will utilize surplus resources to temporarily forgo the need to cut back on hospital activities. But the above is only a temporary stage of delay before substantive changes must be made in the tasks and activities performed by hospitals. At the next stage, we would expect to see hospitals reducing "non-core" activities such as laundry and housekeeping in order to "buffer" the presumably less 'flexible' "core" medical activities.

While the effects of "buffering" should minimize the impact of restraint on medical activities, there will be both short-term and long-term limitations to this response. One will be a reduction or rationing of growth in the core due to inadequate capital funds. That is, while the maintenance of medical services at prior levels may not be unduly affected, there will be some limitations on

expansion. Secondly, the capacity of hospitals to "buffer" core activities will diminish as the availability of re-allocated funds are exhausted. In other words, there is a 'bottom-line' to which non-medical activities can be rationed before it begins to affect all areas of hospital operations. At this point, hospitals must find additional revenue either through deficit spending or appeals to the MOH.

The other order of predicted responses will be qualitative changes in how the administrative component performs its "mediating" role between internal order and external uncertainty. In brief, we would expect there to be a change in how the administrative component collects information and the types of information collected. Moreover, these changes will not be individual hospital adaptations, but rather, a collective response under the auspices of the HMRI. On the basis of this new, relatively 'standardized' information, the OHA will engage in advocacy to initiate negotiations for the implementation of revised performance measurements and reimbursement formulae. Upon such an agreement, we would expect inter-organizational relations to be less conflictual as hospitals secure additional resources on a stable basis.

To clarify the predicted responses, we have divided the chapter into two sections. The first section will consider the empirical evidence of hospital adaptations between 1977-78 and 1979-80 when the effects of fiscal restraint are most obvious. The second section will describe the qualitative changes in information collection and external negotiations observed, then examine the empirical effects of these changes on MOH allocations and hospital spending.

Fiscal Restraint and Administrative Responses: 1977-1980

Fiscal restraint had been affecting government operations and the hospital sector since the early 1970s. By 1977, the government was not satisfied with the impact of these earlier initiatives, and perceived the need to continue efforts to control government expenditure growth. From the Treasury perspective, the need to control spending was linked to the perception that

...one of the root causes of the current inflation problem in Canada is excessive government spending and unnecessary growth in the size and complexity of the public sector.

[McKeough, 1975]

Fiscal problems continued to hinder the provincial treasury after the 1977 election. Though the relative decline in economic growth was not as pronounced as in 1975,

inflation continued to affect the economy. In response to continued inflation, the Treasurer, Darcey McKeough, announced in the 1977-78 budget his intent to "balance the budget" by 1981. As a result, all ministries would be subject to below inflation allocations until the stated 'goal' was achieved. Ministers would be expected to re-allocate their funds accordingly.

The perceived need to address spending was reinforced by recent changes made to federal-provincial spending agreements. Under the new Established Programs Financing Act (EPF) of 1977, responsibility for restraint was re-directed in much the same way as the global budget. That is, the federal government imposed a "cap" on fiscal transfers required provincial governments to adjust their programs to fit available funding. Therefore, the EPF appears to have provided an additional Treasury motive for fiscal restraint within the hospital sector and other policy fields.

Under Dennis Timbrell, the new Minister of Health, the MOH sought to restrict the domain of hospital in-patient services, and expand the use of out-patient services, day surgery and home care [Timbrell, 1977]. That is, some services typically delivered within an hospital setting would be "de-institutionalized." While hospitals could

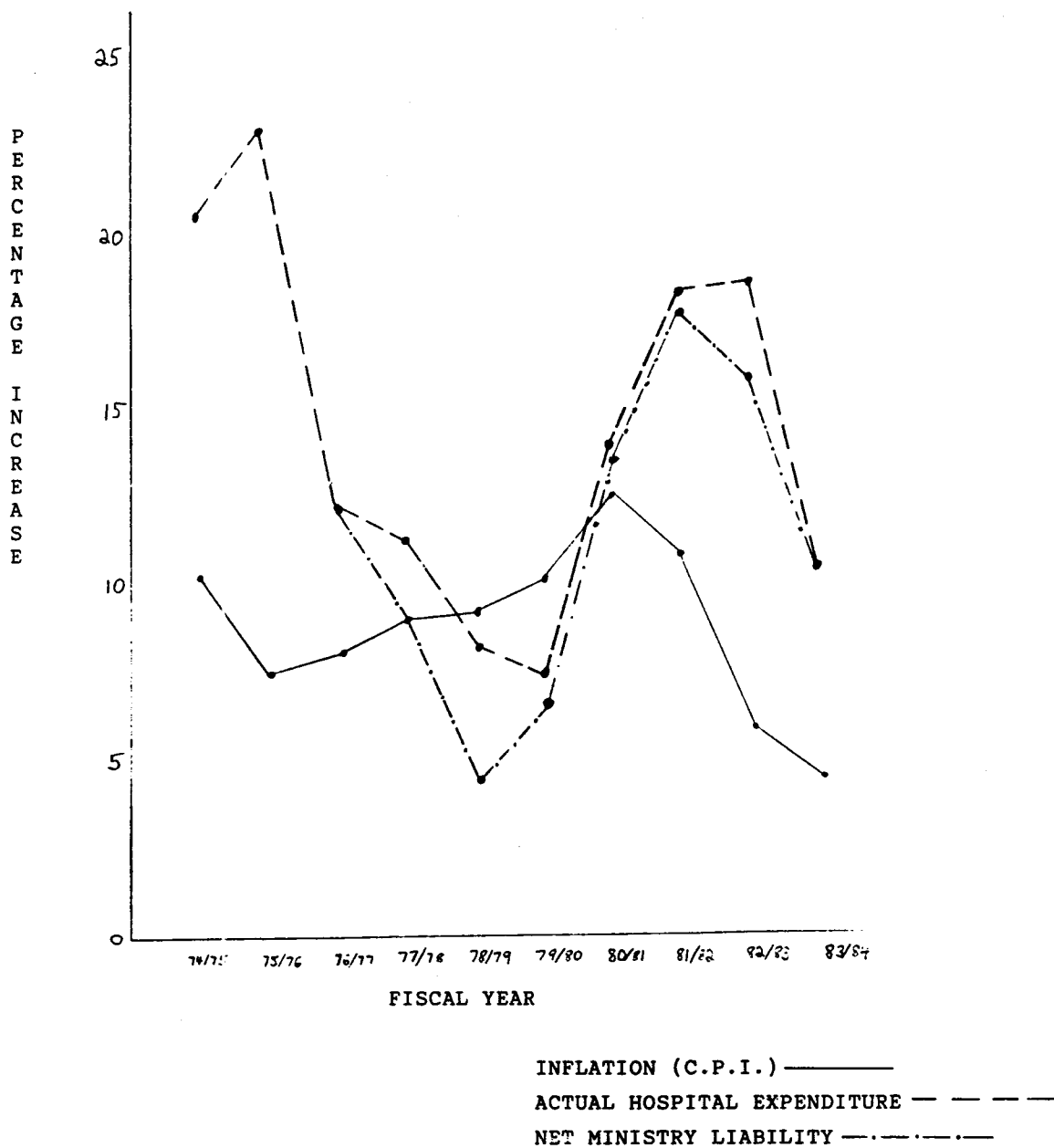
participate in the re-allocation process, particularly with ambulatory care and day surgery [Timbrell,1977], the domain consensus between the MOH and hospitals on in-patient services was clearly severed .

To facilitate the re-allocation and de-institutionalization process, hospital spending would be affected in two ways. First, the Net Ministry Liability for hospital care would be increased, but at levels below the provincial rate of inflation. Accordingly, hospital managers would be responsible for making changes to in-patient procedures, services, staffing and equipment needs to conform with MOH allocations. For the ministry and government, the approach would theoretically avoid conflict over the methodological validity of statistical analysis by forcing hospital administrators to "assess" the internal efficiency of their institution. Ideally, the approach would transfer decision making and conflict from an inter-organizational forum back within hospitals.

As shown in Figure 6.1, there was a great deal of variation in Net Ministry Liability relative to inflation (C.P.I) prior to the fiscal year 1977-78. During these years the variation was "positive" -that is - the level of NML was greater than that of inflation. Yet despite these "positive" increases in global budgets, actual hospital

FIGURE 6.2

PERCENTAGE CHANGES IN INFLATION,
ACTUAL HOSPITAL EXPENDITURES,
AND NET MINISTRY LIABILITY



Sources: Ontario Budget
Hospital Statistics
Estimates

expenditures exceeded the levels of funding set by the MOH. In 1974-75 and 1975-76, hospital spending was two and three times greater than that of inflation.

After the ministry announced its intent to restrain hospital spending in 1977, NML increases are level with or below the rate of inflation for the next three years. In 1977-78, the change in NML was approximately the same as provincial inflation. In 1978-79, the increase in NML was almost half that of CPI. And though the difference between inflation and NML was lessened in 1979-80, there continued to be a "negative" difference of over 3.6%. We can conclude two things on the basis on the above information. First, there was a period of fiscal restraint which would presumably affect current hospital activities. Secondly, it would appear the MOH was relatively successful in maintaining this policy of restraint for a three year period.

In support of restraint at the operating level, capital funding would be "straight-lined" - that is - there would be no increases in available funding from the previous year. In order to stay within the fixed capital budget, requests for capital funding would be assessed by the ministry according to a sliding scale. The scale incorporated four types of spending priorities:

- i) Rectifying safety hazards

- ii) Part 'A' -- improvement of care while removing operating costs so that the capital investment would be recovered within five years
Part 'B' -- identified obsolescence where assured savings would be recovered
- iii) Accommodating a growing workload or new technology which could operate within the current global budget or add only a minimal increase
- iv) Accommodating bed deficits, growing workloads and new technology which would involve increases in operating costs

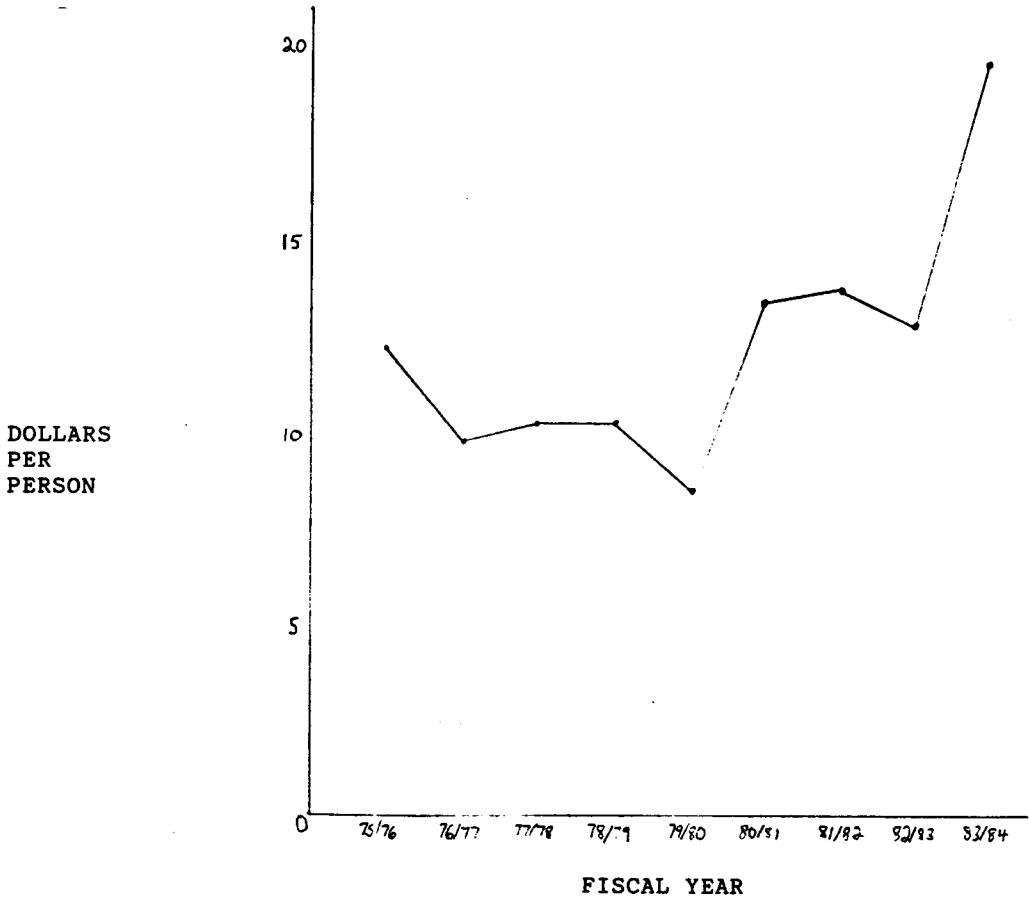
[Hospital Highlights, 1977]

For all intents and purposes, the new criteria on capital spending constituted a 'freeze,' as nearly all requests for funding fell into the third and fourth categories on the scale [Hospital Highlights, 1977]. In other words, the majority of submissions were related to growth rather than safety improvements or "efficiency" gains.

As can be seen, the effect of "straight-lining" capital spending by the MOH is clear [Figure 6.2]. Prior to 1977-78, capital spending fluctuated and showed gains relative to inflation and population increases. But during the first two years of restraint, the absolute increases in such spending are 2.5% and .5% respectively for the first two years (see Appendix A). Moreover, in 1979-80, capital allocations suffered an absolute decrease of nearly sixteen

FIGURE 6.3

CAPITAL FUNDING PER POPULATION



SOURCES: Annual Report, Ministry of Health
Expenditures
Public Accounts of Ontario
Statistics Canada

percent. Accordingly, spending on construction, renovation and new equipment fell behind population increases and seem to indicate the MOH was relatively successful in restricting capital spending.

While there was a clear attempt by the MOH to limit hospital expenditures between 1977 and 1980, what needs to be considered are the effects of fiscal restraint on hospital spending. For this, the more important line contained within Figure 6.1 is that of Actual Hospital Expenditures. The importance is that the changes in this line illustrate the real outcome of MOH policy - that is - decreases in hospital spending.

As can be seen, the variation between Net Ministry Liability and Actual Expenditures is inconsistent. For the period of 1977-78 to 1979-1980, it is not until the second year that fiscal restraint was successful in pulling the rate of percentage increases in hospital expenditures below that of inflation. From a "negative growth" relative to inflation of about 1.5% (in 1978-79, hospital expenditure increases fell even lower the following year with a gap of nearly 3%. Yet despite the "success" in pulling hospital expenditure increases below the rate of inflation, the same continue to be higher than the NML. As discussed in our methodology, some of the discrepancy may be explained by additional hospital revenues. Nevertheless, only during

1979-80 can we speculate with confidence that NML and total Actual Hospital Expenditures (minus additional revenue) were relatively symmetric.

On the basis of the observed patterns in NML and Actual Hospital Expenditure, it would appear that (on average) hospitals were "buffering" some, if not all, services from disruptions in funding levels for the first year. Contextual evidence in support of this conclusion may be found in the difference between MOH expenditure projections and the predicted shortfall in revenue by the OHA which was estimated to be about 4%. Given that the difference between hospital expenditures and NML is roughly 4%, it would appear that hospitals were utilizing "surplus" fiscal resources or accumulating deficits to protect their operations from restraint.

A similar pattern is evident during the fiscal year 1978-79. While the increase in NML is less than 5%, actual hospital expenditures were about 8%. Therefore, it appears hospitals continued to protect their operations though at a decreased level. By 1979-80, the difference between ministry allocations and hospital spending is quite small, and can probably be accounted for by additional hospital revenues such as Workmens' Compensation payments and charges on semi-private and private rooms. As Thompson [1967] predicts, it would appear hospitals were "buffering" their

operations for the first and perhaps second year of restraint. But the capacity of hospitals to "buffer" these functions diminished with each fiscal year so that by 1979-80 it would appear this capacity had been exhausted.

While it appears hospitals were "buffering" some or all parts of their operations, we cannot rule out the possibility that medical activities were being affected by fiscal restraint. If the performance of these activities were somehow being "buffered" and remained relatively inflexible, we would expect no change or only a small decrease in the number of admissions and days of care, accompanied by a large increase in out-patient servicing. As can be seen in Tables 6.1 and 6.2, there was a large drop in the number of admissions and days of care between 1976 and 1977-78, but some of this decrease can be attributed to a change in how hospital reported on their in-patient and out-patient activities (see Chapter Three).

In the second year of restraint, there is another small decrease of 1.3% accompanied by a dramatic increase in out-patient visits of 10%. Conversely, a smaller increase in out-patient visits in 1979-80 is paralleled by an increase in admissions. While inconclusive, there does appear to be a relationship between the different settings of care in which some degree of clinical servicing was being

TABLE 6.1

HOSPITAL ADMISSIONS PER 1,000

1975	1976	1977/78	1978/79	1979/80	1980/81	1981/82	1982/83	1983/84
169.9	166.1	150.2	148.2	149.3	146.1	145.1	144.2	143.3

TABLE 6.2

DAYS OF CARE PER 1,000

1975	1976	1977/78	1978/79	1979/80	1980/81	1981/82	1982/83	1983/84
1426.1	1348.3	1304.5	1284.3	1288.0	1268.8	1270.4	1264.1	1254.6

SOURCES: Hospital Statistics, Ontario
 Hospital Annual Statistics, Canada
 Statistics Canada

TABLE 6.3

OUT-PATIENT VISITS PER 1,000

1977-78	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84
848.9	935.6	970.5	996.5	1032.3	1095.8	1130.7

SOURCES: Hospital Statistics, Ontario
Hospital Annual Statistics, Canada
Statistics Canada

transferred from more expensive in-patient settings to out-patient facilities rather than being rationed.

While the change from in-patient to out-patient services might also suggest hospitals were adopting more efficient ways of delivering treatment in terms of setting (as opposed to techniques), the 'savings' or 'gains' to be accrued would require the reduction of in-patient activities [Evans and Robinson, 1980]. In that substantial reductions were not occurring, it appears that hospitals were not seeking efficiency gains, but rather, diverting patients to ambulatory settings when medically appropriate. That is, despite the imposition of fiscal restraint, some hospitals were able to expand some aspects of service delivery.

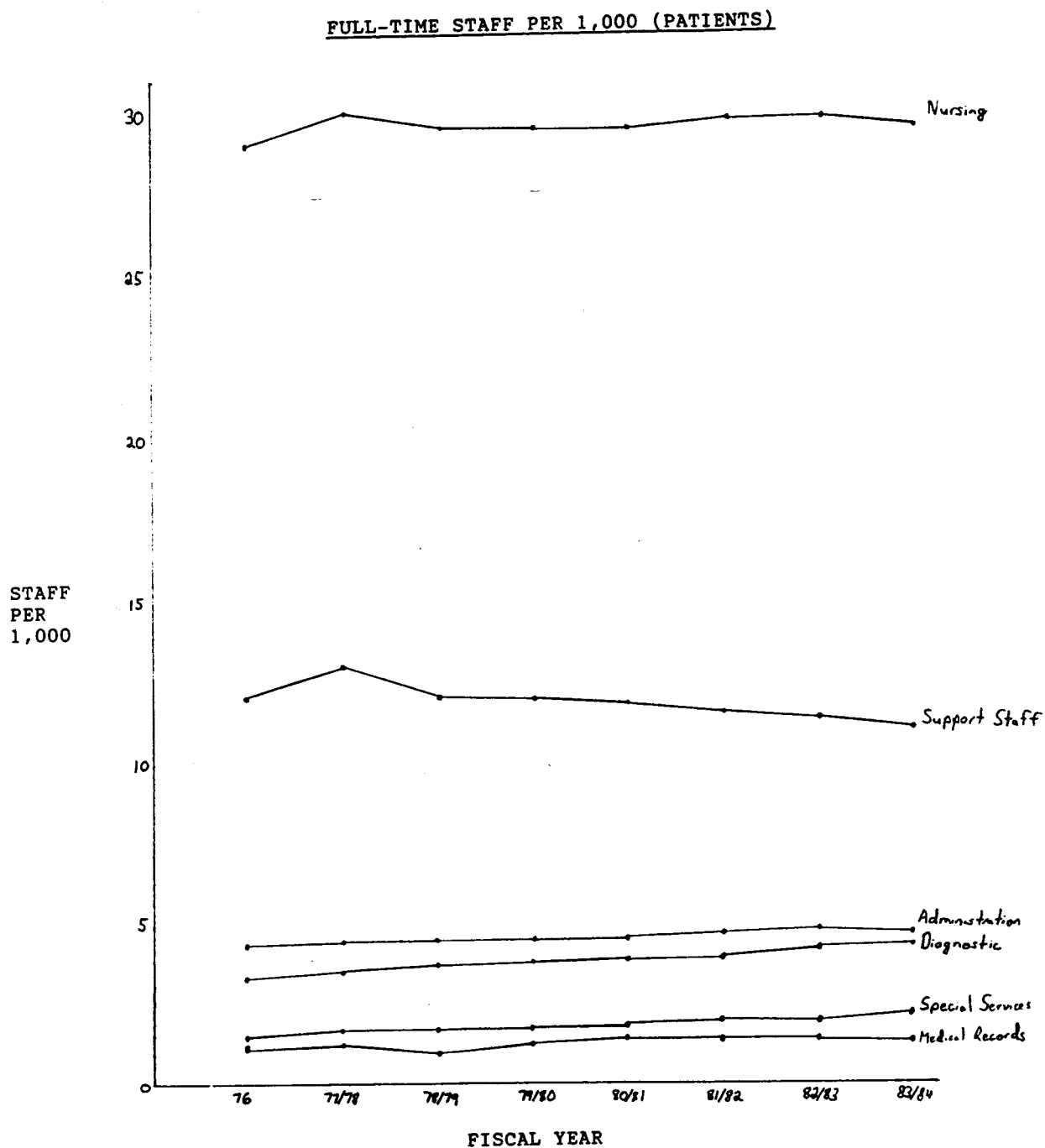
Though we have some evidence hospitals were "buffering" the volume of core activities, we have not ruled out the possibility that it was the performance of such activities that had changed. In other words, hospitals might be maintaining their service levels through newly adopted work procedures which reduced the intensity of labour used. As an indicator of labour intensity, we used the total level of full-time staffing per 1,000 patients [Figure 6.3]. If hospitals were "improving" the delivery of core medical activities, there would be a decreased number of "core" staff in relation to patients. Conversely, our own prediction is that the "core" will remain relatively stable

and it will be "non-core" activities which will prove to be the most 'flexible' and subject to reductions in labour intensity.

The total number of full-time staff per patient increased during 1977-78 across all service areas which is consistent with the "buffering" thesis previously discussed. That is, the performance of all hospital activities were relatively unaffected by a decline in MOH allocations through the use of surplus resources. Thereafter, the changes in labour intensity for the years 1978-79 and 1979-80 show a decrease in non-core activities, and no change or increases in core activities staffing. As suggested, it appears that the greatest 'flexibility' for change is evident in areas other than medical activities.

The exception to decreases in "non-core" activities are in the areas of general administration and medical records. We suggested these areas would remain relatively stable, if not increase as the complexity and external importance of inter-organizational communication increased. As can be seen, general administration remains relatively stable. Conversely, the labour intensity of medical records was subject to dramatic fluctuations between 1977-78 and 1979-80. According to one source, the fluctuations might be accounted for by a delay in the full implementation of 'System 78' in many hospitals. Though this would account

FIGURE 6.3



SOURCES: Hospital Statistics

for the variation, it is not consistent with our expectation that 'System 78' would be perceived as a priority in hospital allocations. The only plausible explanation obtained from the same source is that hospital administrators used the delay to coerce additional funds from the ministry to assist in full implementation.

Furthermore, while we predicted there would be some decrease in the labour intensity of nursing activities, we also suggested these decreases would not be constant. The reasoning was that certain elements of nursing care might be considered discretionary, while the following of medical orders would be less flexible. In order to respond to criticisms that hospital operations were inefficient, there was a perceived need to develop patient classification systems which quantified patients' "needs" in the form of workload measurements [Finlay,1978; Campbell, 1988]. In turn, these could be utilized as indications of hospital performance for reimbursement [Buchan,1979]. By assessing the degree of personal care, feeding, and observation for a particular type of patient, the amount of nursing care to be performed could be standardized [Finlay,1978; Giovannetti and McKague,1973]. The 'standardization' of workload measurements would provide "a stable data basis for prediction and comparison of workloads" [Campbell, 1988]. As a result, many hospitals commenced hiring consulting

firms to assist in the development and implementation of such workload measurements [Finlay,1978].

The effect of these workload measurements would presumably be to limit the degree of discretion allotted nurses in how and how often they attended patient needs. Between 1978-79 and 1980-81, the nurse-patient ratio dropped from 30 per 1,000 to about 29 per 1,000 (Figure 6.3). But while such 'routinization' is consistent with the concept of "efficiency," Campbell [1988] suggests many of the recorded activities were performed at minimal levels to satisfy charting requirements. In other words, care was implicitly "rationed." For example, nurses would ask "How are you?" and proceed to the next patient, but in doing so they would satisfy the charting requirements for 'emotional support' [Campbell,1988]. Thus, the more likely segment of nursing care being affected was the personal relationship between nurse and patient, rather than medical procedures such as the application of medication or monitoring vital signs [Campbell,1988]. In effect, the "core medical activities" of nursing were probably not be affected.

To this point, it appears our predictions on labour intensity are reasonably accurate. First, there was a constant decrease in support staff after an initial year of "buffering." Similarly, nursing activities were subject to

decreases during 1978-79 before stabilizing - the assumption being the discretionary elements of personal care had been rationed. Thirdly, the labour intensity of the administrative component was relatively the same in 1979-80 as 1977-78. And finally, "core" medical activities all followed a consistent trend of increasing labour intensity.

Some caution must be added in reaching these initial conclusions in that the labour intensity in part-time staff does not follow the same pattern as full-time employment (See Appendix C). While there was a percentage decrease in both part-time support staff and nursing for 1978-79, the following years show a constant increase after this initial adjustment. It would appear that some of the effects of cost containment shifted hiring patterns to incorporate larger numbers of part-time rather than full-time workers. Such a change would suggest hospitals were seeking greater flexibility in scheduling and reducing costs associated with the payment of benefits, though we have no empirical evidence that this was the case. Because we do not have all the figures to calculate the Full-Time Equivalent of part-time employees, we cannot reach any firm conclusions on the total effect this might have on the overall labour intensity of hospital services.

A second predicted effect of fiscal scarcity on hospitals was the adaptation of the entire organization

through the impact of "buffering" and changes in labour intensity. That is, there would be a pronounced change in what tasks and activities hospitals performed to survive. To examine these changes, two indicators of resource allocation are considered. Using Figures 6.4 and 6.5, we have assumed changes in the distribution of staff and operational costs reflect changes in how the organization survives. Based upon these indicators, we would expect to see four significant changes in the organizational distribution of staffing and costs.

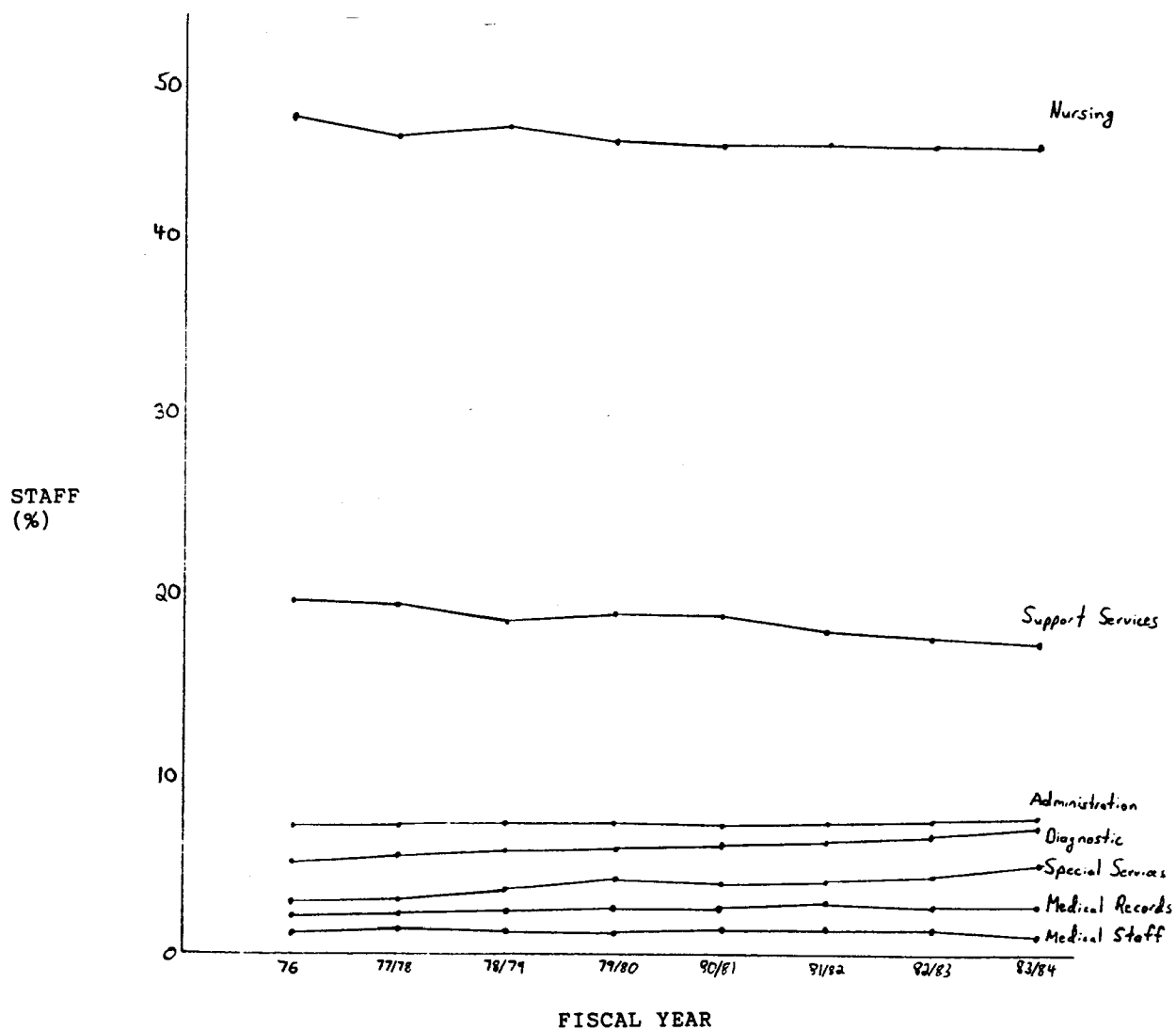
- 1) a decrease in support services
- 2) no change or an increase in administrative tasks
- 3) no change or an increase in core medical activities
- 4) a small decrease in nursing activities followed by relative stability

As can be seen in Figure 6.4, while both "core" and administrative activities used increasingly larger percentages of staffing, nursing and support services suffered decreases in relation to other areas of hospital operations. But whereas decreases in nursing staff are relatively slow after 1979-80, the fall in support services is quite large.

A similar trend can be observed with our next indicator, the organizational ratio of per diem expenses by service area [Figure 6.5]. As in the levels of staffing,

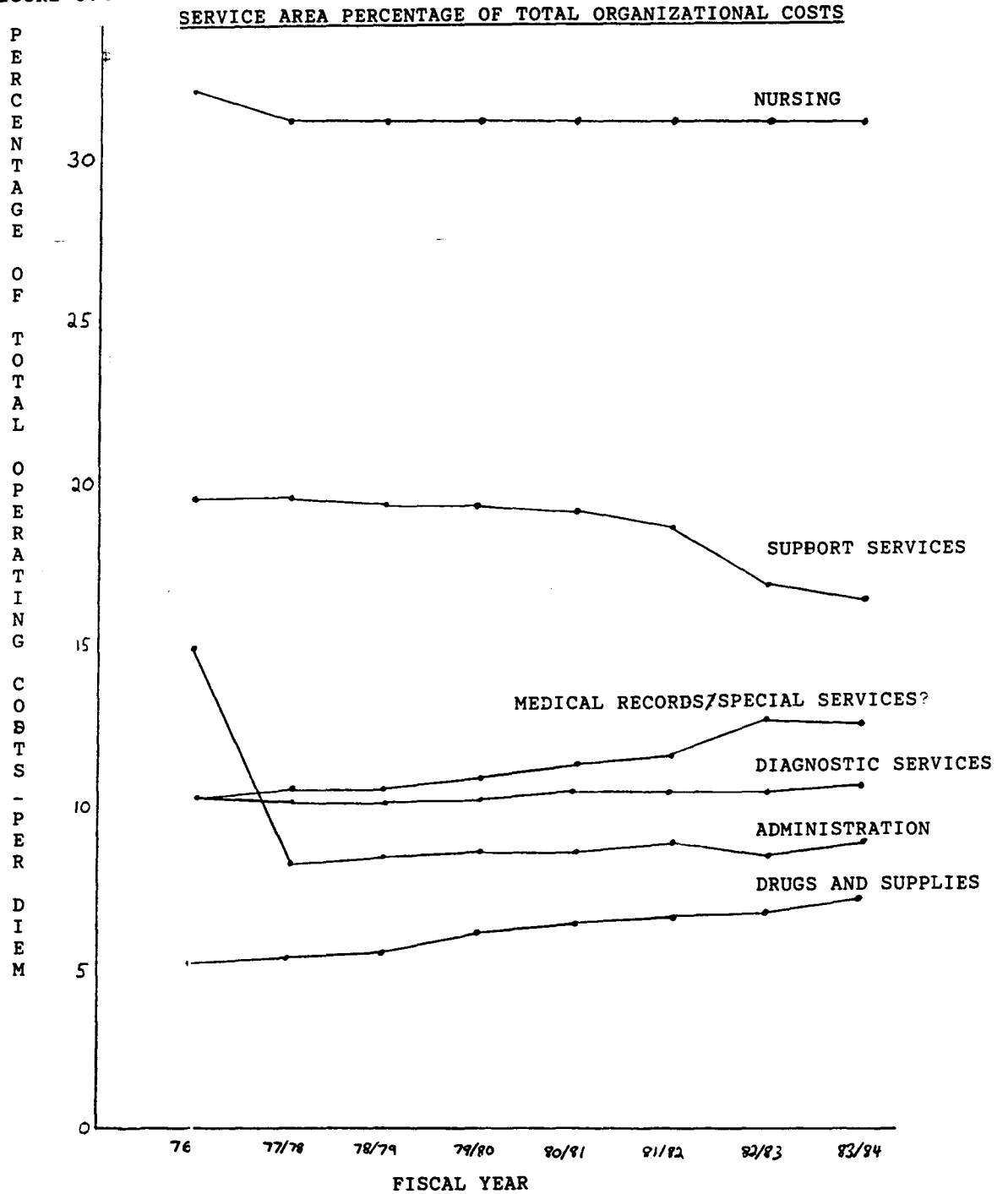
FIGURE 6.4

SERVICE AREA PERCENTAGE OF FULL-TIME STAFF



SOURCE: Hospital Statistics, Ontario

FIGURE 6.5



Source: Hospital Statistics

both the relative costs of nursing and support services show decreases, though nursing remains relatively constant thereafter. In contrast, we see that an increasing percentage of staff and fiscal resources are used to perform "core" medical activities.

As with other non-core tasks, administrative costs suffer a dramatic loss during the first year, but then show incremental gains in the following two years. While contrary to our expectations that the administrative component would increase or remain relatively unaffected in costs, there is another plausible explanation for observed change. That is, hospitals were re-classifying and re-assigning administrative tasks to other parts of the organization. Because of the lack of standardized reporting in what inputs should be classified by departmentalization, it allows for undetected shifts to other departments.¹ The validity of reported hospital spending on administration is also questionable in that the dramatic decrease in per diem costs is contradicted by a small increase in staffing. It is likely then that the post 1977-78 administrative per diem costs are a better reflection of listed departmental spending. On this basis, administration consumes an increasing percentage of organizational costs, while medical records show an increase relative to total organizational staff.

On the basis of the above observations, it would appear a number of responses to fiscal restraint were taking place during the first three years. As argued by Thompson, the initial response was the "buffering" of hospital operations for the first fiscal year. That is, it appears that some institutions were utilizing surplus resources, accumulating deficits or appealing their allocations to the MOH (see below). After an initial attempt to "buffer" all hospital activities, it was necessary for administrators to make changes in what tasks hospitals performed to survive. As predicted, the most 'flexible' activities were those of "non-core" services. Here, the presumably more discretionary elements of overall organizational well-being are adapted or rationed, and the 'savings' applied to what are perceived to be core tasks. Therefore, it appears hospitals were able to maintain the level of servicing through the acquired 'savings' or by re-directing some care to an ambulatory setting. The effects of uncertainty and professional obstacles are clear as the labour intensity of "core" activities do not decrease and, in fact, increase. One exception to the "buffering" of "core" activities is found in the area of nursing care. But as argued, there appears to have been only a limited degree of discretionary activities or 'flexibility' which could be changed before it threatened to affect medical care.

Similarly, there appears to have been relatively few changes in the size of the administrative component by the end of 1979-80. Indeed, the evidence of changes in organizational staffing and spending reflect what has been described as the "two lines of authority." That is, there appears to be little change in either the so-called "medical line" or the administrative component.

While we have argued that "core" activities would remain relatively unchanged, we also suggested there would be changes made to the administrative component and the changes would be qualitative in character rather than quantifiable. Therefore, we shall leave our discussion of administrative changes to the following section as we discuss the external strategies used by hospitals

Nevertheless, the capacity of hospitals to "buffer" and maintain "core" activities decreases each year until apparently exhausted. By 1979-80, the Net Ministry Liability and hospital spending are relatively symmetrical, and it seems reasonable to presume that there would be limits to the degree of "buffering" which could be implemented. That is, these services might be cut to 'bone,' or at least to a level where further reductions might impair "core" activities. Though we cannot conclude that hospitals had reached such a point during 1979-80, it

seems likely that many hospitals would soon have to begin to 'downsize' or 'rationalize' core activities and/or administrative tasks if fiscal restraint was maintained.

Administrative Responses and Resource Acquisition: 1980-84

In this section we examine the strategies which appear to have brought about increases in allocations, and the effects additional resources had on hospital operations. In doing so, we address the following questions. First, what qualitative changes were made in how the administrative component performed its "mediating" role? Secondly, what changes in external strategies were adopted collectively and individually by hospitals, and how are these linked to the qualitative changes made within hospital administrations? And finally, what effects did additional resources have on the previous adaptations to fiscal restraint?

We suggested in the first section that hospitals had possibly reached a 'breaking point' in their capacity to continue "buffering" core activities. The presumption was that additional resources had to be obtained, or else adaptations to the "core" would be necessary. In the case of the former, what was required was a revised agreement on how to measure hospital performance. Similarly, the substantive content of negotiations would require 'new'

information related to performance. In turn, a new consensus would require the willingness of the government to link negotiations on performance measurement with a revised funding mechanism (or contract).

While the previous formula did establish some standard rules of reimbursement, Milnes [1984] study of hospital allocation in the early 1970s suggests the degree of discretion allotted MOH officials was too large. The lack of uniform reporting and difficulties encountered in tracking items meant that there was no clear definition of fixed costs, or precise assignment of supply needs [Ontario,1980]. Similarly, the formula was criticized on the grounds that it failed to differentiate between individual institutions and the case mixes they handled [Ontario,1980; Milne,1984]. And finally, it was argued that the level of inflation was arbitrary and unrelated to actual hospital inflation [Ontario,1980; Milne,1984].

How this discretion was utilized is less clear during the early 1970s. While Milne [1984] found that there was no clear consensus among hospital administrators on the negative use of the MOH's budgetary discretion prior to 1972, he found such a consensus from 1973 onwards. Therefore, the perception of MOH discretion in allocation appears to be directly linked to the first and subsequent rounds of fiscal restraint.

Though the ministry reluctantly acknowledged problems in the funding criteria used in budgetary allocations, there was no apparent means by which these could be addressed. In response to the perceived need for revised performance measurement, the HMRI executive had created the "Redesign Steering Committee" to re-evaluate how hospital data was reported and analyzed. But as was suggested in Chapter Five, there is little or no indication that hospital administrators understood how to use the 'system' to facilitate rationalization and planning [Suttie et al, 1980]. Given the apparent lack of understanding regarding 'System 78,' it would appear the implementation was a dysfunctional response to scarcity if rationalization and efficiency is the predicted necessity for such an adaptation.

Our own prediction is that 'System 78' would provide the basis for a revised means of inter-organizational communication between the MOH, OHA and individual hospitals. Yet 'System 78' was not a reimbursement formula and did not provide a mutual agreement on hospital funding. What would now be required was a set of negotiations on how this "new" information could be used to devise revised performance indicators and reimbursement [Hospital Highlights, 1979; Ontario, 1980].

With hospitals having exhausted their surplus resources, accumulating deficits or winning appeals,

arguments claiming underfunding and inequitable funding were increasingly made to the MOH [Hospital Highlights, 1979,1980]. In turn, the OHA had been successful in influencing the government to establish the Committee on Hospital Resource Allocation and Budgeting in 1979 to resolve some of the conflicts. Included on the panel were ministry officials and OHA, OMA and HMRI members.

The Committee concluded that the funding mechanism used by the Ministry was flawed on a number of grounds [Ontario,1980]. Most importantly, the Committee suggested the present arrangement failed to provide for adequate hospital input on negotiated settlements. As Milnes [1984] concluded, the Committee found that allocations were "arbitrarily" set and hospitals were forced to either comply, appeal or overspend. Similarly, the arbitrary character of the formula meant that hospital administrators did not clearly understand the MOH's criteria for spending. Thirdly, the means by which hospitals were funded failed to recognize that each hospital was "unique" in terms of their caseloads and respective resource needs. Finally, the Committee concluded present MOH funding procedures did not adequately take into account the need for "growth" due to population increases and technological advances.

But the Committee criticisms were not original in that most of these claims had been made by the OHA and hospital

administrators throughout the late seventies. The real need was for a set of formulae which would address these problems. As such, the Committee recommendations were intended to establish possible performance indicators, though the MOH retained the right to reject any and all recommendations.

The recommendations included a number of formulae involving projections of inflation, "growth", new and expanded programs and life support programs. First, the global budget would continue to contain a negotiated component related to inflation, but would be specifically tied to hospital unit costs rather than province-wide rates. While the ministry would retain some flexibility in negotiating projected inflation, it would be limited.

Secondly, it was recommended that global increases incorporate a "growth" formula based upon 'equivalent patient days' (EPDs). Still lacking information which provided a more accurate description of hospital activities and costs, in-patient and out-patient data had been broken down into smaller categories distinguishing between different types of care. [Ontario, 1982b; Ontario, 1988a; Ontario Hospital Association, 1989b]. Thus, EPDs were a weighted mix assigning a value to different types of care categorized according to acute days, long term days, newborn days, day surgery, emergency room and clinic and therapy

visits. To compensate for MOH fears that the "growth" formula could entail unlimited expansion, adjustments for patient growth would be limited to increases of 2% above the previous years budget. Therefore, the amount of discretion the ministry had previously exercised was restrained, but hospital expansion due to patient growth or changing EPD mixes would be "capped."

Two other mechanisms were recommended for criteria related to life support programs and new and expanded programs. The former included specific activities such as neo-natal intensive care and cardio-vascular surgery, which were considered to be too uncertain in application to allow for cost projections. Because of the perceived uncertainty, the ministry would consider these programs on a line-by-line retrospective basis. Similarly, new and expanded programs receiving ministry approval would be monitored for two or three years to estimate the actual costs of providing the innovative services. After this period, an appropriate percentage increase would be negotiated and amended to the hospital's base budget. In essence, the revised formula would separate these costs from global increases and relieve hospital managers from having to re-allocate funds from existing programs.

The Committee report was released in May of 1980, but the recommendations were not immediately implemented. The

reasons for the delay are unclear. While only conjecture, it appears the MOH and government had cause to fear the impact of the proposed changes. Though inflation would continue to be negotiated, the ministry would have less discretion in setting below inflation increases.² In that hospital inflation is presumed to be higher than the provincial level, negotiations would be linked to how much higher. More importantly, the performance measurements were all explicitly linked to the "process" rather than estimates of effectiveness. That is, the formulae categorized types of care (and costs) with no clear incentives (negative or positive) to contract hospital domains or alter current procedures and technology.

Despite a delay in the adoption of the COHRAB formulae, the ministry did proceed to allocate additional resources in 1980-81. In Figure 6.1, we see that increases in both the Net Ministry Liability and Actual Hospital Expenditures rose more rapidly than inflation. Moreover, the distance between each is narrow suggesting funding and actual spending were roughly symmetric. In addition, absolute spending on capital projects was returned to its 1978-79 level, though continued to decline relative to population increases [Figure 6.2].

Accounting for the determinants of increased MOH allocations is difficult to conclude with great confidence. One possible determinant suggested by Deber and Vayda [1985] is that the possibility of a coming election affected the willingness of the government and MOH to continue the policy of below inflation increases in hospital funding. By 1980, Ontario newspapers frequently contained stories related to claims of hospital 'underfunding' and the claimed symptoms of inadequate resources - delays in surgery, waiting lists and overcrowded hospitals. In essence, some hospital members (primarily the medical staff) resorted to advocacy through the media in an effort to mobilize public awareness and support.³ With growing public dissent, there is some logic to the suggestion that the government sought to avoid electoral conflict over health care spending.

Another possible generalization which might be made is related to institutional-MOH budget negotiations on 'deficit bailouts' and official appeals. According to Deber and Vayda's [1985] study of Ontario's health care system and OHA [1981] estimates, by 1980-81 almost half of Ontario's hospitals appealed their allocations. Similarly, a Woods-Gordon examination of hospital funding concludes there was a marked increase in 'deficit budgeting' as the MOH bailed out many institutions suffering a year end loss in operating revenues [Canadian Medical Association, 1984].

The validity of the above evidence is reinforced by the difference between the announced MOH levels of hospital funding which was 4.5%, and the year end total of NML at over 13%. With no major funding changes to hospital allocations announced during the fiscal year, the logical conclusion is that successful appeals and 'deficit budgeting' contributed to the recorded increases. Moreover, the symmetry between MOH allocations and hospital spending suggests the use of deficit 'bailouts' and successful appeals increased hospital spending, while limiting the potential for high levels of overspending. That is, hospitals were probably spending only what they received by way of additional resources.

Despite the seemingly different explanations, it is also possible to suggest that the increases in capital and operational allocations occurred at the institutional-ministry level of negotiations as a result of the coming election. That is, the desire for electoral success broke the 'political will' of the government, and ministry officials were granted greater discretion in meeting the demands of individual hospitals.

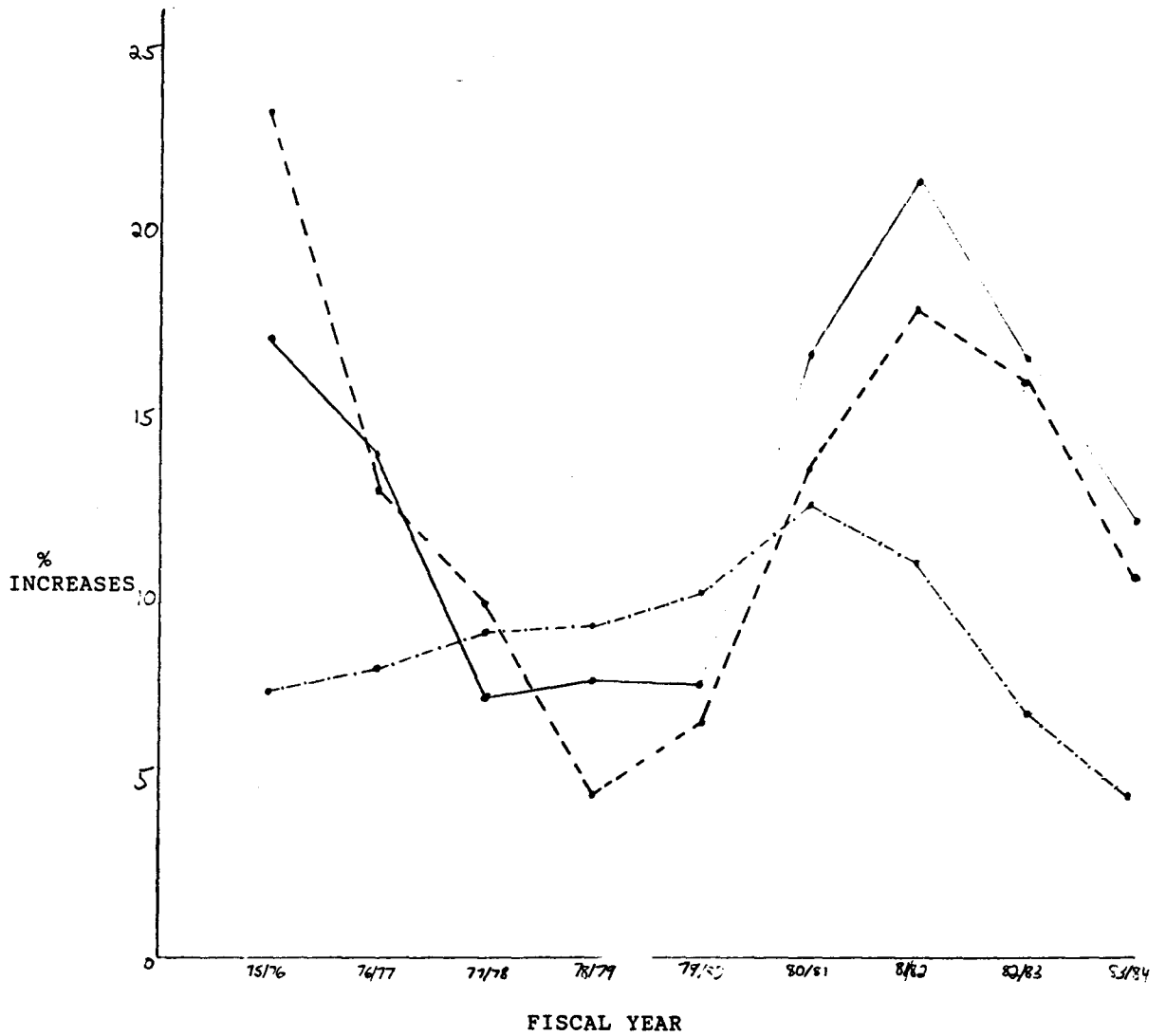
Further evidence of this might be drawn from the increasingly vocal criticism of the OHA during this time period despite increased allocations. Some claimed the OHA

was not playing a strong enough role in helping hospitals maximize their funding [Ingram,1983]. Moreover, while the increases in operating and capital funding eased to some degree the severity of restraint, there continued to be claims of inadequate levels of fiscal resources, inequity in how these were distributed and uncertainty in how much might be received the next year [Gillepsie,1978]. In other words, the degree of discretion in MOH funding criteria continued to be perceived as inappropriate and uncertain.

As can be seen below (Figure 6.6), the OHA was relatively successful in maintaining and even increasing the institutional share of MOH spending until 1977. Similarly, the OHA managed to secure above inflation increases on capital spending until the middle of the decade. But starting in 1977, the hospital sector share for both operating and capital expenditures declined. Logically, the OHA's environment had changed along with that of hospitals. The emphasis on "de-institutionalization" implied hospital domains would remain relatively stable, if not contract. Accordingly, resource shares were re-allocated from a shrinking pie away from hospital spending to other areas of MOH activities. In other words, the OHA's role had changed from that of maintaining the hospital sectors share of MOH spending through relatively harmonious co-operation (or "domain maintenance") to protecting the sectors share

FIGURE 6.6

PERCENTAGE INCREASES -- MINISTRY OF HEALTH
BUDGET, HOSPITAL SPENDING AND INFLATION



SOURCES: Annual Report
Expenditures
Public Accounts of Ontario
Ontario Budget

MINISTRY OF HEALTH ———
HOSPITAL SPENDING - - - - -
INFLATION (CPI) - · - - -

from contraction (or "domain protection). Yet through the late seventies and early eighties there was no apparent effort to "go public" with a consistent and organized media campaign which would mobilize public support.

Two factors appear to have brought about a change in OHA strategy. The first was slow response by the MOH in adopting the COHRAB recommendations. Co-operative in character, the initial negotiations had consisted of an analysis of hospital criticisms and revisions to hospital performance indicators through the HMRI. But the reluctance in adoption by the MOH left unresolved the conflict on how funds should be distributed equitably. Similarly, the increases in hospital funding achieved through individual hospitals' initiatives (i.e. appeals or 'bailouts') did not resolve the uncertainty regarding MOH funding in future years.

The other possible factor was the Conservative government's announcement that it intended to resume its efforts to contain health care expenditures. The 13% increase in ministry funding for 1980-81 was apparently an election ploy not to be repeated. During negotiations in the Fall of 1981 for the next fiscal year, the OHA concluded that the MOH would again subject hospitals to below inflation increases [Ingram,1983]. In response to the perceived threat, the OHA for the first time made an active

effort to publicize hospital allocations through the media. In a 1981 press release, the OHA claimed that if the MOH's budgetary allocations were implemented, Ontario hospitals would accumulate operating deficits of nearly \$100 million. In support of this initial dissent, the OHA conducted a media campaign of press interviews and public statements to highlight the "plight" of Ontario hospitals and presumably elicit public support.

The ministry's initial response was to announce the creation of the Business-Oriented New Development program which would allow hospitals to generate and retain additional revenue on their own to off-set projected deficits. Under BOND, hospitals could increase charges on semi-private and private rooms, Workmens' Compensation Board rates, and create new sources of revenue through parking services, concessions or other innovative schemes unrelated to medical services. The OHA responded through media interviews and public statements welcoming the opportunities presented by EOND, but doubting the capacity of such sources to generate adequate revenues to cover expenditures [Ingram, 1983].

The result of the OHA's public advocacy is evident in 1981-82 allocations [Figure 6.1]. While provincial inflation rose almost 11%, the Net Ministry Liability for hospital spending increased more than 17%. But having

succeeded in acquiring a large increase in hospital funding for the 1981-82 fiscal year, the following year's ministry allocation illustrates a renewed disparity between hospital spending and MOH policy [Figure 6.1]. The implication of the cost-revenue gap is that the lack of a consensus using only a competitive strategy meant continued uncertainty for hospitals. Instead, what was required was a stabilizing mechanism in the form of new funding mechanism.

Presumably in response to the OHA's pressure tactics, the ministry finally announced its intent to adopt the COHRAB recommendations starting in the 1983-84 budget year. In addition, the ministry announced an across-the-board bailout of hospitals suffering deficits. For deficit bailouts, hospitals would receive additional funds to cover the accumulated losses and the estimated yearly shortfalls would be added to their base budgets. From an announced increase of 11.5%, the Net Ministry Liability by year end was nearly 16%. While there continued to be a gap of 2.5% between NML and Actual Hospital Expenditures, some of this might be accounted for by increased revenues generated through BOND.

The effects of the new funding formula in 1983-84 are evident. While the total percentage increase is lower than the previous year, much of the difference may be accounted for by deficit bail-outs the previous year. Nevertheless, NML and Actual Hospital Expenditures were more than the

twice the level of provincial inflation, and hospitals did not appear to be spending much more than they were allocated. More importantly, hospital spending consistently exceeded CPI increases well into the late 1980s [Ontario, 1988b]. Therefore, it appears the implementation of new funding formulae effectively established a 'new' consensus on hospital performance and domain.

What still needs to be assessed is the long term impact of fiscal restraint on hospital tasks and activities. That is, how did additional but uncertain resources affect hospital adaptations. In the case of hospital service levels, there were some adaptations, but for specific reasons which lend support to our "buffering" thesis. With the influx of additional funding after 1980-81, there is a noticeable decrease in admissions, but this continues to be paralleled by a jump in out-patient services [Tables 6.1/6.3]. There are two plausible explanations for these results. One is the capital allowances made by the MOH in 1980-81 for those hospitals seeking to renovate their facilities for out-patient care. The other is an increase in operational funding for out-patient services.

In conjunction with the changes in service levels during fiscal restraint, it appears that it was 'relative abundance' not 'scarcity' which prompted changes in the

delivery of medical services. Hospitals did not use 'slack' resources for the purposes of innovation, but rather, to "buffer" core activities. Only the addition of positive fiscal incentives seems to have affected where "core" medical activities were performed.

Conversely, the acquisition of additional (but uncertain) funding not did not induce innovation in how "core" and "non-core" activities were performed. That is, the changes noted in labour intensity remains consistent whether during a period of so-called 'restraint' or 'abundance.' The "buffering" of "core" activities allowed the intensity of labour in these areas to increase without any obvious disruption. While there remains the very real possibility that the increases would have been even more dramatic without fiscal restraint, it still suggests hospitals were successful in preventing decreases.

Similarly, the reduction of labour intensity in support services follows a clear and consistent downward trend. Therefore, it appears hospitals had not reached a 'breaking point' in "buffering" by 1980-81, and could continue to make changes in favour of "core" activities. By extension, it suggests either that the additional fiscal allocations were not allowing for much in the way of 'slack' resources, or the changes made in the area of non-core services were permanent.

The adaptations made to nursing care are less consistent. After the initial reductions in labour intensity, there was a stable period of two years before the staffing ratio began to increase, though never returning to its 1977-78 peak. But there is a small reduction again between 1982-83 and 1983-84 which cannot be explained. Nevertheless, the adaptations described do appear to have effectively limited any large scale growth by holding staffing to some implicit level of stability.

And finally, the effects of fiscal restraint and subsequent adaptations made within the administrative component confirms our prediction that such changes would be qualitative rather than quantitative. That is, it would be how this component performed its "mediating" role which changed rather than just its size or intensity. Therefore, restraint had little impact on the labour intensity of general administration, while there were minor long term changes in the size of medical records. In the latter case, we might expect some increases given the changes in how fiscal and medical information were collected.

In sum, we can conclude that fiscal restraint induced a series of adaptations that changed the prerequisites for organizational survival. Fewer human and fiscal resources were allocated to support services as administrators searched for 'slack' or 'flexible' resources which could be

re-distributed. In contrast, the re-distribution of these resources served to "buffer" the presumably inflexible "core" activities from the effects of fiscal restraint. The substantive changes in how hospitals performed medical activities sought by the Ministry of Health would not occur. Instead, it was changes in how the administrative component "mediated" between the needs of medical activities and Ministry of Health demands that were adapted. In essence, administrators sought a new consensus with their environment which would establish both certainty and abundance for the performance of core activities.

ENDNOTES

1. As we discussed in our methodology, the inclusion of medical records with special services in hospital reporting on departmental costs does not allow us to speculate on the possibility of "growth" according to this indicator.
2. For example, in 1978-79 the MOH awarded hospitals a 4.5% increase while provincial inflation was approximately 9%.
3. We have reached this conclusion by surveying newspaper articles reporting on hospital problems and claimed bed closures. In almost all cases, the primary source of the information came from the medical staff. Indeed, hospital administrators were usually reluctant to comment on their particular internal situations.

CHAPTER SEVEN

CONCLUSION

In the introduction, we suggested that any 'model' of organizational change should have a logical and consistent concept of the organization and its environment. We further argued that the conceptualization of organizational change must be able to link and explain internal adaptations with changes in the environment. Accordingly, we reviewed the 'efficiency,' 'rationing' and 'administrative models' and assessed the validity of each for application to the study of Ontario hospitals. The net sum of our conclusions was that the conceptual constructions of all three 'models' are inadequate for a comprehensive explanation of hospital adaptation. On the basis of this theoretical argument, we argued that the work of James Thompson [1967] would serve as a more appropriate generalization of hospital adaptations. What is now required is that we review the empirical results of our study, and reassess the predictions made by Thompson and the other 'models.'

We shall first re-state the conceptual predictions of Thompson and the 'efficiency,' 'rationing' and 'administrative models.' In the next section, we will

review our empirical conclusions and assess which 'model' appears to be the best generalization of the observed results. In the final section, we shall discuss some of the implications of adaptation for the study and practice of health care policy.

The 'Efficiency,' 'Rationing,' 'Administrative' and Thompson 'Models' Re-visited

The 'efficiency model' suggests hospitals responded to fiscal restraint in two distinct stages. The first stage consisted of a immediate variety of cost-saving measures that presumably introduced greater "efficiency" in hospital operations. The second stage incorporated an increasing reluctance on the part of hospital administrators to seek further cost-savings, and a greater likelihood that hospitals resorted to political pressure, official appeals and overspending. The net effect of restraint was substantial changes to operations.

Since the authors fail to define both what they mean by efficiency, or what areas would become more efficient, we suggest the "best" indicator of efficiency would be permanent decreases in spending and labour intensity even when resources are more abundant. Moreover, given the failure to predict what activities would become more

"efficient," we would expect the adaptations to occur in all service areas.

In contrast, the 'rationing model' concludes there were no substantial changes in how hospitals functioned. Instead, there would be a reduction in resources that would not be maintained when additional resources were obtained. Like the 'efficiency model,' the 'rationing model' does not specify what areas of hospital operations would be most affected. Therefore, the logical implication is that there would be decreases in all service levels, labour intensity and department spending. In fairness to Stoddart [1985], there is a secondary presumption that it was organizational growth which was most constrained rather than the maintenance of activities. Nevertheless, we would then expect the impact on all organizational activities to remain relatively stable during restraint, followed by substantial across-the-board growth if the rationing thesis is a comprehensive explanation.

For the 'administrative model,' the more relevant prediction is that there will be a qualitative change in the role of the administrative component. That is, there will be a change in this role which includes adaptations to the information 'systems' and allocation processes. More importantly, there is an explicit assumption that these changes would be for the intrinsic purpose of becoming more

efficient. While evaluating the qualitative character of the argument is admittedly difficult, we assume two factors of the intrinsic utility of these changes should be observable. One is that administrators have a clear understanding of the changes, and how they may be used to become more efficient. The other is that the changes are made within individual institutions rather than on a collective, external basis in which hospitals act in concert.

While we have given a considerable amount of attention to Thompson's [1967] conceptual predictions throughout the text, we shall briefly re-state the main expectations for change. One was a change in not only the level of fiscal allocations, but also, the process and criteria of funding. That is, we presume these changes in the 'contract' between hospitals and Ministry of Health to reflect a breakdown in the previous domain consensus. In response to restraint, a number of changes in hospital activities would occur. Initially, we expected to see hospitals "buffer" all activities by using surplus resources, but that this type of "buffering" would decrease as the fiscal capacity of hospitals diminished. Thereafter, hospital administrators would have to make changes to the performance of some activities.

Since we assumed "non-core" activities to be more 'flexible' and vulnerable to changes in labour intensity and other costs, we expected that these activities would be curtailed. Conversely, since "core" activities are presumed to be the least 'flexible' and of greater importance to key organizational actors, administrators would continue to "buffer" these areas. While we did not rule out the possibility that organizational growth would be restricted even for "core" tasks, we anticipated that administrative responses would attempt to reduce the need for such restrictions. As argued, this order of "buffering" would be primarily a short term response that is reduced in efficacy as 'slack' activities are reduced. That is, there would be an implicit limit to the capacity of hospitals to maintain the protective actions. As a result, there would be a qualitative change in how the administrative component acts to "mediate" between internal order and external demands. Accordingly, administrators would attempt to manipulate their task environment by adapting how they "mediate" and communicate with the Ministry of Health.

As operationalized, these qualitative changes would be in the information system of hospitals. But unlike the 'administrative model,' the changes would be primarily extrinsic in value as opposed to intrinsic. Therefore, the changes would incorporate collective and cooperative

negotiations, and be used to establish a funding formulae (or 'contract') which reduced the previous discretion of the MOH. More importantly, the formulae will be explicitly related to measuring the cost of hospital activities, not the adaptation of the core.

Fiscal Restraint Re-visited

In Chapter Four we argued that with the introduction of the Hospital Insurance and Diagnostic Services Act, the government of Ontario accepted legal and political responsibility for the "buffering" role of acquiring and distributing fiscal resources. With the acceptance of the "buffering" role, a domain consensus was established to facilitate the expansion of a medical care system within a hospital in-patient setting. How this development would take place and what sort of facilities, services, staffing and equipment would be required was explicitly linked to "medical need" as determined through physician decision making and demands. Through line-by-line budgeting, the determination of hospital domains flowed from the "bottom-up" -that is - from physician to hospital administrator to the HSC and to Cabinet.

In the late sixties, changes in the "bottom-up" budgetary process were the result of changing government

perceptions of economic performance and public sector expansion. Resource scarcity altered government-level behaviour in how it would allocate funds and how much would be allocated. Under PPBS, funds would be allocated from the "top-down." Yet while PPBS instituted an organizational framework in which hospital administrators would have to alter the internal distribution of resources to fit objectives, it was the amount of funding received which would determine the necessity of adaptation. That is, the global budget would establish a "cap" which served as the primary indicator of 'scarcity' or 'relative abundance.'

As predicted by Thompson [1967], there was a breakdown in the domain consensus between hospitals and the Ministry of Health. In effect, PPBS in conjunction with fiscal restraint constituted a unilateral change in the consensus on hospital domains. With an emphasis on efficiency, it was expected that how activities were performed, and how often, would change. Similarly, the expansion of domain was no longer considered a priority, but rather, the government and MOH sought a state of "non-growth" and even "contraction" through de-institutionalization.

Unlike the 'efficiency' and 'rationing models' which predict an immediate response through cost-saving measures, there was an initial one year period of "buffering." While aggregate spending did decline indicating cost containment,

the effects of such measures are not in evidence.

Plausibly, there may have been some rationing or other containment measures, but the more likely response might have been a restriction on growth. Nevertheless, hospitals clearly spent more than allocated, though at a rate lower than the previous year. The logical conclusion is that hospitals were using surplus resources to "buffer" activities and delay the need for change.

It is not until 1978-79 there were noticeable changes in hospital activities. Moreover, these changes were selectively applied in conformity with our own distinction between "core" and "non-core" activities. That is, there were substantial reductions in support services, while "core" medical activities continue to rise in labour intensity. If hospitals were becoming more "efficient" or "rationing" then they were doing so according to Thompson's predictions.

Similarly, the effects of fiscal restraint on medical service levels are not consistent with either the 'efficiency' or 'rationing models.' While there was small drop in admissions during 1978-79, there was a concurrent and dramatic increase in out-patient visits. In the following year, there was a rise in admissions with a decreased rate of growth in out-patient care. What seemed to be happening was that some hospital used surplus resources

to develop their ambulatory facilities and relieve the pressure on in-patient activities. Once these resources were exhausted and ambulatory possibly operating at full capacity, hospitals increased their use of in-patient settings to accommodate demand. Thereafter, special provisions by the ministry in the early 1980s allowed hospitals to expand ambulatory care and again reduce admissions.

There are few indications that hospitals were using what was perceived to be a less costly setting of care for the purposes of "efficiency" or simply "rationing" services. Instead, there is a clear relationship between in-patient and out-patient services which suggests those medical cases appropriate for ambulatory care would be diverted to relieve the need to extensively ration admissions. The more logical conclusion is that administrators were using out-patient care to "buffer" medical services from extensive changes.

By 1979-80, the hospitals had changed their activities in response to restraint. That is, the more discretionary tasks of support services and some personal elements of nursing had been reduced either through "rationing" or "efficiency." In doing so, hospitals devoted a large percentage of resources and activities to the maintenance of medical tasks. Though we cannot rule out the possibility that growth was rationed as suggested by Stoddart [1985],

there is nothing about this which contradicts Thompson who acknowledges this might occur when restraint is severe. The difference, if any, appears to be the pattern and extent of any rationing which is more explicitly applied to "non-core" activities than implied by the 'rationing model.'

Similarly, we cannot rule out the possibility that hospitals did become more "efficient." As we saw, there were reductions in labour intensity and costs of "non-core" activities that remained intact even after additional resources were obtained in the 1980s. While this may also be the result of continued uncertainty about fiscal allocations, or simply mean that hospitals retained these services at a rationed level, there is still a chance that hospitals had indeed become more "efficient." The needed caveat for such a tenuous conclusion is that it is "non-core" rather than "core" activities in which the changes are most pronounced. Instead, medical activities appeared to be relatively unaffected, and the impetus for continued organizational growth remained intact.

While the above changes deal with quantifiable changes, we must still address the qualitative predictions of the 'administrative model' and Thompson alike. As suggested by the latter, changes in the environment would necessitate a change in how the administrative component performs its "mediating" role. That is, the administrative component

should be the most 'flexible' and adaptable area of task performance. While the 'administrative model' similarly predicts a change in the administration of the organization, these changes are implied to be in area of allocation through more restrictive criteria. Not only does this imply a change in the role played by hospitals, but also that this role would be primarily intrinsic in character.

But as described in Chapters Five and Six, there is no clear indication that hospital administrators or physicians understand how the information could be used to make changes in the techniques and procedures of medical care. According to Suttie et al [1980] in their survey of hospital members, few appeared to utilize or understand how HMRI data derived from System '78' could assist decision making on departmental and service allocations. Instead, the importance of HMRI data appeared to be specifically related to another major administrative task -the acquisition of fiscal resources.

Though the introduction of 'System 78' into Ontario hospitals did change how hospitals collected information, the impetus for change was not exclusively the result of internal decisions. Indeed, the initiative was primarily conceived and negotiated beyond hospital boundaries under

the auspices of the HMRI. In other words, hospitals and the MOH cooperated within a 'neutral' inter-organizational group on how performance would be measured. The shift to System '78' provided more detailed information on the differences between hospital activities on both an intra- and inter-organizational basis. Using this information, hospitals could attempt to demonstrate in a common and accepted 'language' that the demands of handling patient care were greater, or qualitatively different from their counterparts.

By extension, the provision of "better" information allowed the Committee on Hospital Resource Allocation and Budgeting [Ontario, 1980] to construct new indicators of hospital performance acceptable to the MOH, OHA and individual hospitals. In essence, the growth of information systems within hospitals appeared to serve the extrinsic purpose of standardizing new means of communication on an inter-organizational basis, and assisting in the negotiation of a new domain consensus.

As a result, the changes in the administrative component appear to be directly linked to how hospitals shaped or manipulated their task environment using cooperative and competitive strategies. While the competitive strategies are similarly implied by the 'efficiency' and 'rationing models,' they fail to describe

how stability was achieved and maintained. In other words, it was the cooperative strategy of information exchange and negotiation which ultimately served to establish the basis for a new set of funding formulae. By extension, it was the institutionalization of a 'contract' which stabilized relations between hospitals and the Ministry of Health. Though we do not wish to imply that all conflict and uncertainty was resolved, there was a common agreement reducing some elements of MOH discretion, and reaffirming the current application of hospital technology and activities.

Implications for the Study and Practice of Health Care Policy

In our introduction, we referred to the "tenuous conclusions" of fiscal restraint to date. What was clear was that there was a temporary period in which hospitals spending was curtailed, followed by renewed increases well above the rate of provincial inflation. What was missing is a consistent explanation describing the linkage between 'restraint' and 'abundance.' We have argued the linkage is consistent with the sociological logic of organizations as described by Thompson. Accordingly, there are four

conclusions which can be made with regard to the study and practice of health care policy.

Firstly, the administrative role of "buffering" the technical "core" contradicts the logic of fiscal restraint and PPBS. The expectation of these government strategies for change are a re-allocation of resources to identified priorities and substantive changes to how the organization performs its key tasks. Ironically, if Thompson's 'model' of organizational adaptation is accurate, the "rational" response of administrators is to "buffer" these key tasks by re-allocating resources from other areas of operations. As a result, the assumed impetus for organizational growth (i.e. technological expansion) remains substantially unaltered because of the "rational" responses of Ontario hospitals. While arguably restraint limited the pace of expansion, the demands for growth remained intact.

While this lack of technological change is not a conclusion that is radically different from that of the 'efficiency' and 'rationing' models, there is a second conclusion which neither 'model' can incorporate. These 'models' simply state that it was "political pressure" which coerced the government of Ontario into increased spending. What makes these conclusions problematic is that both ignore how the relative stability fundamentally re-entrenches

hospital technology through the negotiation and implementation of new funding formulae. Rather than inducing 'innovation' in how hospitals perform medical activities, conflict and resolution are explicitly linked to the 'standardization' of information. In doing so Ministry of Health discretion is restricted and these budget formulae constrain the former's latitude for introducing change.

Thirdly, in that the 'efficiency' and 'rationing' models fail to articulate changes in hospital spending on task performance, they cannot explain the implications for subsequent efforts to constrain hospital spending. Given the changes made to "non-core" activities, it is likely that hospitals by the late 1980s possessed less 'flexibility' in adapting to restraint. In other words, the so-called 'slack' resources have apparently been exhausted either through "efficiency" gains or simple rationing. Accordingly, it is likely that the responses to restraint would be immediate and more conflictual, with a higher possibility that hospitals would have to ration rather than adapt medical activities.

In addition, the immediate response would likely be to re-negotiate the domain consensus using similar techniques as during the 1970s and early 1980s. Ironically, the presumably higher likelihood of rationing would mean an even greater percentage of organizational resources are being

allocated to the administrative component as spending on medical care is reduced. More importantly, the lack of evidence that this administrative growth improves the "management" of resources suggests additional funds would be expended on maintaining the domain consensus through information collection and exchange. Indeed, it seems likely that the 'standardization' and 'complexity' of information exchange would become even more intense, while further entrenching the core technology of hospitals.

The implication is that a consensus on changes on medical procedures and hospital domains must precede fiscal restraint. Moreover, the consensus must be negotiated and agreed upon between all organizations involved in the delivery and regulation of hospital services. In doing so, the subsequent 'contract' should include specific indications of expected adaptations, and regulatory conditions must be introduced to facilitate the creation of managerial coalitions (as opposed to dual authority) to implement and monitor the changes.

Lacking such a prospective consensus, funding levels and hospital spending will follow a cyclical pattern of 'consensus' and 'unilateral change' - the likely result being a greater proportion of hospital and MOH resources expended on maintaining and entrenching hospital domains through increasingly complex funding formulae.

APPENDIX A

Supplementary Tables -- Fiscal Allocations

TABLE A.1

Capital Funding Between 1975 and 1983 --
 Absolute Totals and Percentage Increases

<u>INCREASE</u>	<u>TOTAL</u>	<u>PERCENTAGE</u>
1975-76	99,764,303	----
1976-77	83,132,349	(16.7)
1977-78	85,162,000	2.4
1978-79	85,850,320	.50
1979-80	72,084,000	(15.8)
1980-81	113,158,266	56.9
1981-82	120,786,000	6.7
1982-83	113,896,103	(5.7)
1983-84	171,456,000	50.5

Sources: Annual Report, Ministry of Health
 Expenditures
 Public Accounts of Ontario

1. Figures in () indicate negative percentage change.

TABLE A.2

Percentage Increases in Inflation (CPI),
Actual Hospital Expenditures and Net
Ministry Liability

	<u>INFLATION</u>	<u>HOSPITAL EXPENDITURE</u>	<u>NML</u>
1974-75	10.2	21.7	20.8
1975-76	7.5	23.2	20.5
1976-77	8.0	12.7	12.6
1977-78	9.0	11.3	9.0
1978-79	9.1	8.4	4.5
1979-80	10.1	7.4	6.5
1980-81	12.5	13.8	13.4
1981-82	10.8	18.2	17.9
1982-83	5.8	18.5	15.9
1983-84	4.4	10.2	10.1

Sources: Ontario Budget
Hospital Statistics
Expenditures
Public Accounts of Ontario

TABLE A.3

Ministry of Health Budget -- Total
Allocation and Percentage Change

	<u>Total Allocation</u>	<u>Percentage Change</u>
1975-76	3,019,194,653	----
1976-77	3,438,622,984	13.8
1977-78	3,680,109,001	7.0
1978-79	3,966,130,731	7.8
1979-80	4,271,933,711	7.7
1980-81	4,895,043,777	14.5
1981-82	5,812,552,088	18.7
1982-83	6,770,135,955	16.4
1983-84	7,583,752,812	12.0
	1975 to 1984	151.2

Sources: Ontario Budget
Annual Report, Ministry of Health
Public Accounts of Ontario
Expenditures

APPENDIX B

Supplementary Tables -- Hospital Utilization

TABLE B.1

Hospital Admissions, Days of Care and
Out-patient Visits -- Total Figures
and Percentage Changes

	<u>ADMISSIONS</u>	<u>DAYS OF CARE</u>	<u>OUT-PATIENT</u>
1975	1,385,239	11,625,642	N/A
1976	1,372,591 (.91)	11,142,148 (8.8)	N/A
1977-78	1,252,563 (8.8)	10,874,913 (.70)	7,076,854
1978-79	1,246,373 (.49)	10,798,518 1.6	7,866,761 11.6
1979-80	1,266,361 1.6	10,923,256 1.2	8,230,835 4.6
1980-81	1,249,930 (1.2)	10,852,244 (.65)	8,523,241 3.5
1981-82	1,251,634 .13	10,957,004 1.0	8,903,982 8.4
1982-83	1,258,645 .56	11,026,092 .63	9,558,346 16.0
1983-84	1,264,132 .43	11,065,613 .35	9,972,653 4.3

Sources: Hospital Statistics, Ontario
Hospital Annual Statistics, Canada

1. Negative percentage increases are designated by ().
2. Previous to 1977-78, out-patient visits were reported together with in-patient data.
3. Starting in 1977-78, the Ministry of Health altered hospital reporting to coincide with the fiscal year. To adjust for the change, we estimated the monthly rate of admissions and days of care and multiplied by twelve. As a result, the listed totals may under- or over-estimate actual utilization.

APPENDIX C

Supplementary Tables -- Hospital Staff

TABLE C.1

Total Full-time Staff by Classification
and Service Area Between 1976 and 1984

MEDICAL STAFF

	<u>Total Staff</u>	<u>Percentage Change</u>
1976	1306	----
1977-78	1464	12.6
1978-79	1361	(7.3)
1979-80	1382	1.5
1980-81	1445	4.5
1981-82	1465	1.4
1982-83	1531	4.5
1983-84	1407	(8.2)
	1976 to 1984	7.7

NURSING

	<u>Total Staff</u>	<u>Percentage Change</u>
1976	40687	----
1977-78	40917	.56
1978-79	39924	(.19)
1979-80	39542	(.96)
1980-81	39812	.68
1981-82	40580	1.9
1982-83	40601	.05
1983-84	39836	(1.88)
	1976 to 1984	(2.09)

SPECIAL SERVICES

	<u>Total Staff</u>	<u>Percentage Change</u>
1976	2246	-----
1977-78	2231	(.66)
1978-79	2419	8.4
1979-80	2691	11.2
1980-81	2635	(2.1)
1981-82	2682	1.7
1982-83	2789	3.9
1983-84	2954	5.9
	1976 to 1984	31.4

DIAGNOSTIC

	<u>Total Staff</u>	<u>Percentage Change</u>
1976	4903	-----
1977-78	5046	2.9
1978-79	5107	1.2
1979-80	5096	(.21)
1980-81	5223	2.4
1981-82	5435	4.1
1982-83	5589	2.8
1983-84	5612	.41
	1976 to 1984	14.4

MEDICAL RECORDS:

	<u>Total Staff</u>	<u>Percentage Change</u>
1976	1881	-----
1977-78	1942	3.2
1978-79	1369	(29.5)
1979-80	1988	45.2
1980-81	2031	2.1
1981-82	2081	2.5
1982-83	2068	(.06)
1983-84	2044	(1.2)
	1976 to 1984	8.7

General Administration

	<u>Total Staff</u>	<u>Percentage Change</u>
1976	6135	-----
1977-78	6128	(.11)
1978-79	6084	(.71)
1979-80	6097	.21
1980-81	6102	.08
1981-82	6152	.81
1982-83	6196	.71
1983-84	6084	(1.8)
	1976 to 1984	(.83)

SUPPORT SERVICES

	<u>Total Staff</u>	<u>Percentage Change</u>
1976	17433	-----
1977-78	17726	1.6
1978-79	16095	(9.2)
1979-80	16371	1.7
1980-81	16272	(.60)
1981-82	16184	(.54)
1982-83	15900	(1.7)
1983-84	15513	(2.4)
	1976 to 1984	(11.0)

Sources: Hospital Statistics, Ontario

1. "Special Services" includes the departments of psychology, pharmacy, physiotherapy, occupational therapy, speech therapy, audiology and social work.
2. "Diagnostics" includes technicians from radiology and laboratory services.
3. "Support services" includes dietary, laundry and linen, housekeeping and maintenance staff.

TABLE C.2

Total Part-time Staff by
Classification and Service area
between 1976 and 1984

MEDICAL STAFF

	<u>Total Staff</u>	<u>Percentage Change</u>
1976	1752	---
1977-78	1777	1.4
1978-79	1856	4.4
1979-80	1875	1.0
1980-81	1924	2.6
1981-82	1939	.78
1982-83	1929	(.52)
1982-83	1977	2.4
	1976 to 1984	12.8

NURSING

	<u>Total Staff</u>	<u>Percentage Change</u>
1976	12760	----
1977-78	14999	17.5
1978-79	14705	(1.96)
1979-80	15261	3.7
1980-81	16651	9.1
1981-82	18485	11.0
1982-83	19845	7.3
1983-84	21235	7.0
	1976 to 1984	66.4

SPECIAL SERVICES

	<u>Total Staff</u>	<u>Percentage Change</u>
1976	381	----
1977-78	440	15.5
1978-79	428	(2.7)
1979-80	483	12.7
1980-81	507	5.0
1981-82	548	8.0
1982-83	592	8.0
1983-84	630	6.4
	1976 to 1984	65.5

DIAGNOSTIC

	<u>Total Staff</u>	<u>Percentage Change</u>
1976	527	----
1977-78	650	23.2
1978-79	725	11.5
1979-80	783	7.9
1980-81	887	13.3
1981-82	1036	16.7
1982-83	1157	11.6
1983-84	1223	5.6
	1976 to 1984	131.3

MEDICAL RECORDS

	<u>Total Staff</u>	<u>Percentage Change</u>
1976	402	----
1977-78	463	15.3
1978-79	422	(8.9)
1979-80	492	16.6
1980-81	538	9.4
1981-82	845	56.9
1982-83	607	(28.0)
1983-84	662	9.0
	1976 to 1984	65.0

GENERAL ADMINISTRATION

	<u>Total Staff</u>	<u>Percentage Change</u>
1976	1530	----
1977-78	1708	11.6
1978-79	1771	3.6
1979-80	1837	3.7
1980-81	1973	7.3
1981-82	1984	.56
1982-83	2065	4.1
1983-84	2122	2.8
	1976 to 1984	38.6

SUPPORT SERVICES

	<u>Total Staff</u>	<u>Percentage Change</u>
1976	4293	----
1977-78	4731	10.2
1978-79	4536	(4.1)
1979-80	5037	11.0
1980-81	5324	5.7
1981-82	5782	8.6
1982-83	6141	6.2
1983-84	6253	1.8
	1976 to 1984	45.6

Sources: Hospital Statistics, Ontario

1. Classifications according to service as above [Table A.4].

APPENDIX D

Supplementary Tables -- Operational Costs

TABLE D.1

Departmental Distribution of Gross Operating
Costs (Per Diem) and Percentage Change

	<u>1976</u>	<u>1977-78</u>	<u>1978-79</u>	<u>1979-80</u>
TOTAL	138.55 ---	151.91 9.6	165.65 8.8	177.19 7.1
NURSING	43.69 ---	47.21 8.0	51.04 8.1	55.42 8.8
LAB/ECG/EEG	9.22 ---	9.95 8.1	10.87 10.2	11.68 9.6
RADIOLOGY	5.10 ---	5.52 8.4	5.99 7.8	6.53 9.2
SPECIAL SERVICES/ MEDICAL RECORDS	14.17 ---	15.86 12.1	17.49 10.2	19.35 10.9
GENERAL ADMINISTRATION	20.67 ---	12.52 (38.8)	13.77 10.0	15.11 9.8
DIETARY	10.21 ---	10.90 6.9	11.84 8.5	12.60 10.0
LAUNDRY	3.30 ---	3.57 9.0	3.79 7.3	3.96 4.8
HOUSEKEEPING	6.02 ---	6.42 6.6	6.76 5.6	7.09 6.5
OPERATIONS AND MAINTENANCE	8.08 ---	9.29 15.0	10.18 8.9	10.86 8.8
DRUGS AND SUPPLIES	7.11 ---	8.13 14.5	9.20 13.3	10.66 15.3
EDUCATION	4.72 ---	4.98 5.5	4.88 (1.4)	3.98 (18.0)
SHARED DEPRECIATION	2.14 ---	2.31 8.1	2.55 10.4	2.83 9.3
BENEFITS	n/a ---	10.80 ---	11.63 8.3	12.02 3.5
OTHER	3.98 ---	4.45 11.75	5.04 13.4	5.08 .80

	<u>1980-81</u>	<u>1981-82</u>	<u>1982-83</u>	<u>1983-84</u>
TOTAL	199.15	230.06	264.67	289.52
	12.2	15.5	15.0	9.5
NURSING	61.76	71.14	82.84	89.24
	11.5	15.1	15.8	8.5
LAB/ECG/EEG	12.95	14.89	17.31	19.06
	10.5	15.0	17.2	10.2
RADIOLOGY	7.73	8.98	10.19	11.31
	17.0	15.6	13.4	11.2
SPECIAL SERVICES/ MEDICAL RECORDS	22.38	26.63	33.67	36.65
	16.0	19.3	26.0	8.8
GENERAL ADMINISTRATION	16.94	19.99	22.48	25.01
	12.2	17.9	12.5	11.5
DIETARY	13.83	15.64	17.08	18.07
	9.5	12.9	9.0	5.8
LAUNDRY	4.25	4.76	5.15	5.49
	7.3	12.8	9.8	6.8
HOUSEKEEPING	7.89	8.92	10.03	10.65
	11.4	12.8	13.8	6.2
OPERATIONS AND MAINTENANCE	12.53	14.28	15.81	17.32
	16.7	13.4	10.9	10.1
DRUGS AND SUPPLIES	12.56	14.87	17.31	20.83
	19.0	17.7	17.4	20.7
EDUCATION	6.26	6.97	7.66	8.20
	64.5	11.8	9.8	6.75
SHARED DEPRECIATION	3.31	3.67	4.22	4.90
	16.0	12.0	13.7	17.0
BENEFITS	12.92	15.23	18.52	20.88
	7.5	17.8	21.9	12.4
OTHER	6.20	6.54	6.01	6.35
	22.4	5.6	(7.5)	5.6

Sources: Public Accounts of Ontario
Hospital Statistics, Ontario

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