

Improving Hospital Performance through Policies to Increase Hospital Autonomy: Methodological Guidelines

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1. Introduction

Public hospitals are an important part of health systems in developing countries, and depending on their capacity, act as first referral, secondary or last referral facilities. These hospitals are generally responsible for 50 to 80 percent of recurrent government health sector expenditure in most developing countries (Barnum and Kutzin, 1993), and utilize nearly half of the total national health expenditure in many of these countries (Mills, 1990). Under the prevailing conditions of increasing health care costs, it is thus no surprise that “hospitals, as the main spenders within the healthcare system, are in the limelight” (Montoya-Aguilar, 1994). In a bid to find new resources to fund the high cost activities of the hospitals as well as to utilize existing resources more efficiently, governments in some developing countries have started giving varying degrees of autonomy to public hospitals in the hope that this would both reduce the financial burden of hospitals on governments and strengthen the efficiency and effectiveness of public hospitals.

However, despite the implementation of hospital autonomy in a number of public sector hospitals around the world, relatively little research has been directed towards evaluating the experiences of these hospitals, and assessing the overall merits and limitations of hospital autonomy. As part of its overall strategy of conducting policy-relevant research into matters that are likely to be of importance to government policy-makers and USAID missions in Africa, the Africa Bureau in USAID under its Health and Human Resources Analysis for Africa project commissioned the Data for Decision Making project (DDM) at Harvard University to conduct five case studies on hospital autonomy. These studies were conducted in Ghana, Kenya and Zimbabwe within sub-Saharan Africa, and in India and Indonesia outside of Africa.

The overall objectives of the DDM-HHRAA project on hospital autonomy were (a) to describe different approaches which have been taken in different parts of the world to improve performance of public hospitals through increased autonomy, and to improve allocative efficiency of government health spending by shifting public funds away from public hospitals; (b) to analyze factors which contribute to successful implementation of a strategy to increase hospital autonomy; and (c) to formulate a set of guidelines to support the design of policies to improve hospital performance through greater autonomy.

At the onset of the project, a provisional conceptual framework was proposed by

the principal investigators at Harvard University. This framework was intended to guide the assessment of the autonomy effort in each participating country, and assist in organizing the presentation of the data and results (see Chawla and Berman, 1995). The evaluation framework suggested a combination of qualitative and quantitative analyses of the experience of the study hospitals with autonomy. Based on the project guidelines, the four evaluative criteria used in assessing hospital autonomy in each country, were efficiency, equity, public accountability, and quality of care. The research methodology employed in undertaking the studies included secondary data collection and analysis, direct observation by the study teams, interviews, and field surveys.

This general framework was subsequently modified by the project teams in course of their enquiry. This paper draws upon the experience of all the studies, and presents what we believe is a more "refined" version of the earlier methodology.

The rest of these guidelines are organized as follows. Autonomy has been defined in a number of different ways, and the notion seems to connote different things to different researchers. We look at the various definitions of autonomy in section II, and provide a convenient functional typology. Methodological guidelines for evaluating hospital autonomy are presented in section III. Executive summaries of the five case studies are placed in the appendix.

2. Hospital Autonomy: Concept And Issues

Defining Hospital Autonomy

Autonomy is defined in the dictionary as the quality or state of being self-governing, especially, "the right or power of self-government"; "existing or capable of existing independently"; and "subject to its laws only". However, such absolute criteria are of little help in defining hospital autonomy, as no hospital in any country is completely self-governing, totally independent, or subject to its own laws. After all, hospitals, whether in the public or private sector, are all subject to government regulations in one form or the other.

In order to address this problem, some authors have defined autonomous hospitals as those that are "at least partially self-governing, self-directing, and self-financing" (Hildebrand and Newbrander, 1993). While such a definition acknowledges the relative nature of autonomy, it raises the question: How "partial" can the powers of the hospital be to remain compatible with common notions of autonomy? In other words, how does one decide the "cut-off" point between autonomy and the lack of it?

It is our contention that the term "autonomous hospital" has meaning only when used in the sense of fulfillment of specific criteria for autonomy on which consensus is reached. In other words, hospitals can only be autonomous within a predefined context. Within this context, hospitals can enjoy various levels of autonomy. Again, in order to gauge the extent of a particular hospital's autonomy, it is important to specify, without ambiguity, the characteristics (for each of the hospital's management functions) of each level of autonomy.

In this light, we have proposed below a framework for hospital autonomy, using concepts and ideas over which there seems to be reasonable agreement in the autonomy literature. Prior to that, however, we present a brief critique of existing frameworks of hospital autonomy.

A Framework for Hospital Autonomy

Hospital autonomy has been conceptualized in various ways in the literature, but the proposed frameworks are usually either country or context-specific, or else make several questionable, simplifying assumptions (e.g., Hildebrand and Newbrander, 1993; Stover, 1995; Maxwell, 1995). It is beyond the scope of these guidelines to review all the frameworks, but it is useful to consider some (illustrative) conceptual problems with these frameworks.

Many of these frameworks of hospital autonomy consider only the ownership (i.e., fully public to fully private ownership), and management functions (i.e., governance, management, and financing) of hospitals. Such conceptualizations do have the advantage of relative simplicity. However, in these frameworks, the authority that individual hospitals enjoy in decision-making is assumed to be synonymous with the ownership of the hospital. In other words, government ownership of the hospital is automatically assumed to imply a lower level of autonomy than private ownership - an assumption that we feel is questionable.

Also, in many of these frameworks, "full" autonomy necessarily implies privatization. However, we feel that privatization is not necessarily the most obvious, or even the most appropriate, endpoint of autonomy, since certain desirable aspects of public health care delivery (notably, ensuring equity) might be unachievable under privatization. Moreover, privatization of public-sector hospitals in developing countries is likely to be interpreted as an abdication of social responsibility on the part of the government (as acknowledged by the authors themselves), and will probably be politically very risky. In order to address some of these problems and limitations, we propose a different conceptual framework of hospital autonomy.

In our framework, we define hospital autonomy along two dimensions: the extent of centralization of decision-making (extent of autonomy); and the range of policy and management decisions that are relevant to hospitals (including both policy formulation and implementation). We believe that these are the appropriate dimensions along which hospital autonomy should be discussed. In our opinion, the ownership characteristics of the hospital have little to do with how much autonomy a hospital has (or can have). An autonomous hospital can exist just as easily under government ownership, as under private ownership. It is the extent of decentralized decision-making that occurs within the hospital, and the extent to such decision-making is feasible for each of the management functions, that are the relevant considerations. Moreover, as explained above, autonomy, as it exists in the private sector, may be inappropriate for the public sector.

Our framework also does not require us to assume that private hospitals - by

virtue of their "privateness" - have greater autonomy; and, therefore, the implication that greater autonomy automatically means privatization. Furthermore, this framework attempts to lessen the subjectivity involved in categorizing hospitals as "more" or "less" autonomous, by basing this decision on specific hospital characteristics and the powers that its managers possess in each functional area. Of course, we are still left with the problem of the relative weights to be assigned to autonomy with respect to each management function. For lack of an immediate better alternative, we assume equal weights for each function. Last, but by no means least, our framework is simple to understand and use.

Table 2.1 presents our conceptual model in the form of a 7X3 matrix, with the extent of autonomy and the policy/management functions representing the two axes of the matrix. In our model, autonomy is conceptualized as a continuum from a situation where all decisions are made by the owner (public or private), to one where the system of decision-making and policy formulation is highly decentralized. We differentiate between decision-making at the macro level, i.e., in the national health domain; and the decision-making occurring within the domain of hospitals. In this continuum, we define 3 stages (1-3) for each of the policy and management functions.

Health domain refers to decisions that are made at the level of the government or at the government-hospital interface, over which hospitals, typically, have only limited control. **Hospital domain**, in contrast, refers to those activities undertaken within the hospital, over which the hospital management usually exercises much greater control.

The two health domain functions are: formulating overall (national or state) health goals (e.g., deciding on national health targets, health programs, allocation of health resources, etc.), and setting hospital-specific goals (e.g. deciding on hospital roles and functions, reporting requirements, evaluation criteria, etc.).

The five hospital domain functions, respectively, are: strategic management, procurement, financial management, human resource management, and administration. **Strategic management** refers to the function of defining the overall mission of the hospital, setting broad strategic goals, managing the hospital's assets, and bearing ultimate responsibility for the hospital's operational policies. **Procurement** refers to the purchase of drugs, medical and non-medical hospital supplies, and hospital equipment. **Financial management** refers to the generation of resources for the running of the hospital, and the proper planning, accounting, and allocation of these resources. **Human resource management** refers to the training and management of the various categories of hospital personnel. Procurement management refers to the purchase of medical and non-medical supplies for the hospital, as well as the

Table 2.1
Conceptual Framework for Hospital Autonomy

<i>Policy and Management Functions</i>	<i>Extent of Autonomy</i>				
	<i>Fully Centralized Low Autonomy</i>	----->			<i>Fully Decentralized High Autonomy</i>
		<i>Some Autonomy</i>			
		<i>a</i>	<i>b</i>	<i>c</i>	
A. Health Domain					
Overall Health Goals	All decision making entirely by owner	Decision making jointly by owner and hospital management			
Hospital Specific Goals	All decision making entirely by owner	Decision making jointly by owner and hospital management		Decision making entirely by hospital management	
B. Hospital Domain					
Strategic Management	Direct control by owner: Government, Parastatal, or private	Governance through a Board appointed by owner, and guided by owners, but not subservient to owner		Independently constituted Board, making independent decisions	
Administration	Direct management by owner, who also sets the rules for management of the hospital	Limited powers decentralized to hospital management; owner still weilds some influence over management decisions		Independent management operating under Board's directions, with significant independent decision-making capacity	
Procurement	Centralized procurement, with owner deciding on quantities and total financial outlay	Combination of centralized and decentralized procurement		Procurement completely under control of hospital management	
Financial Management	Full funding by owner; owner has financial control	Owner subsidy plus funds through other sources, some owner influence but finances generally under Board's control		Self-financing; no owner subsidy; funds entirely under Board control; significant independent decision-making capacity for managers	
Human Resource Management	Staff appointed by owner; completely under owner's regulatory control	Staff employed by Board, and subject to the Board's regulations, but also subject to owner's regulations		Staff employed by Board; all conditions and regulation set by Board; managers have significant decision-making capacity	

purchase of hospital equipment. **Administration** refers to all the other responsibilities (i.e., other than financial, personnel and procurement management) involved in the day-to-day running of the hospital and the discharge of the functions defined by the mission statement. In Table 2.2, we summarize the specific activities that fall under the purview of the various policy and management functions described in Table 2.1.

Table 2.2
Activities within Various Policy and Management Functions

<i>Policy and Management Functions</i>	<i>Specific Activities</i>
A. Health Domain	National goal-setting, Role definition, Laws and regulations
B. Hospital Domain	
Strategic Management	Mission definition, Strategic planning, Operational guidelines, Asset management
Financial Management	Resource mobilization, Resource planning and allocation, Accounting of income and expenditures
Human Resource Management	Hiring and firing of personnel, Creation of posts, Determination of employee rules, Contracts and salaries
Procurement	Purchase of drugs and medical supplies, Purchase of non-medical supplies, Purchase of equipment
Administration	All other day-to-day management activities required in implementing hospital mission and running hospital, such as: time schedules, space allocation, information management, consumer relations, etc.

Approaches Used in Implementing Hospital Autonomy

The public hospital system can be reorganized to grant varying levels of independence to various sub-units. This reorganization could, for instance, entail the transfer of authority for planning, management, resource mobilization, and resource allocation from the central government and its agencies to:

- field units of central government ministries or agencies;
- subordinate units or levels of government;

- semi-autonomous public authorities or corporations;
- area-wide, regional or functional authorities; or
- non-governmental private or voluntary organizations.

Reorganization of authority to grant greater autonomy can be done through the processes of deconcentration and delegation (Rondinelli et al, 1984 and Mills, 1990).

Deconcentration, or the reorganization of authority in general, refers to the redistribution of some amount of administrative authority to lower levels in the hierarchy. Within guidelines established by the central agency, district hospitals are permitted some element of discretion to implement projects and proposals, and to adjust directives to local conditions. Deconcentration can lead to two kinds of hospital administration structures: a vertical pattern of local administration, and an integrated, or prefectural pattern. In the vertical pattern, the local hospital staff are employed by a ministry and are responsible to their own ministry. The public health and revenue collection officials in a hospital, for instance, would report to different superiors at different ministries. Coordinating structures such as a district committee may be sanctioned in order to ensure alliance between local and central ministries, and may be permitted financial discretion to some extent. In the second form of administration, the integrated form, a local representative of the central government is responsible for the enactment of all government actions within the hospital. Minimal requirements for this include a specifically defined geographical sphere for which managers are responsible, at least one senior staff member with strictly defined powers, a budget and staffing establishment, and a method of communicating local needs to the central authority.

Delegation, or the reorganization of authority specific to functions, involves the transfer of decision making and management authority for particular functions to organizations which are not directly controlled by the central government ministries. Functions may be delegated from the central government to organizations such as public corporations and regional planning and development authorities, and other parastatal organizations which are not officially within the government structure.

The nature and extent of autonomy would depend on the degree to which the government continues to retain control over the various functions of the hospital, particularly important functions such as (a) health policy formulation and the establishing of national priorities; (b) the allocation of certain resources, in particular capital funds; (c) control over quality and licensing; (d) regulation of health personnel, including selection and recruitment, training, salaries and wages, discipline and discharge, etc.; and (e) regulation of user-fees, allocation of surplus, and financial accounts and bookkeeping.

Evaluating the Impact of Autonomy

In Table 2.3, we present a 5X4 matrix that can be used in order to assess the impact of hospital autonomy on the performance of the hospital. On one axis, we specify the five evaluative criteria commonly used to evaluate hospital performance, namely efficiency, quality of care, public accountability, equity, and resource mobilization. On the other axis, this impact is measured on a scale ranging from a negative impact to a significant improvement in performance. This matrix was used in assessing the impact of autonomy in the five countries in which we undertook evaluation of hospital autonomy.

Relationship of Hospital Autonomy and Health Sector

Table 2.3
Impact of Autonomy

<i>Evaluative Criteria</i>	<i>Levels of Impact</i>			
	<i>Adverse Impact</i>	<i>No Change</i>	<i>Some Improvement</i>	<i>Substantial Improvement</i>
Efficiency				
Quality of Care and Public Satisfaction				
Accountability				
Equity				
Resource Mobilization				

Reform

As we have argued elsewhere (see, for instance, Govindaraj and Chawla) hospital autonomy forms an important part of the whole health reform package and is inextricably linked to other reforms, such as resource mobilization, increasing competition, encouraging private sector participation, etc. Moreover, since hospitals consume a substantial share of health budgets in many developing countries, reforms related to the functioning of hospitals and the health system overall tend to be mutually reinforcing. Hospital autonomy thus has many linkages with other components of the health system, and often the

relationship is such that it is difficult to sustain autonomy without other reforms, or fully realize the potential of other reforms without autonomy. Indeed, in countries where hospital autonomy has been an important policy initiative, like New Zealand, Singapore and United Kingdom, fundamental health care financing reforms have also been pursued simultaneously.

Table 2.4 below categorizes the relationship between hospital autonomy and health sector reforms, and illustrates the mutually reinforcing role and nature of the two.

The objectives and impact of increasing hospital autonomy should therefore be evaluated not only within the context of other measures to improve performance of public hospitals, but also within the larger context of health sector reforms.

Table 2.4
Autonomy as a Component of Health Reform

<i>Reform</i>	<i>Support Provided to the Reform by an Autonomous Hospital</i>	<i>Support Provided by the Reform for Improving Performance of an Autonomous Hospital</i>
1. Resource Mobilization	Improves performance of fee collection and management of funds	Supports and enables financial autonomy
2. Introduction of National Health Accounts & Budget Tracking	Makes budget tracking and control easier and government expenditure more transparent	Encourages responsible data collection, management and analysis; improves overall hospital management
3. Decentralization & Devolution	Complements and supports decentralization and devolution of decision making	Supports autonomy
4. Market Competition	Provides competition to private hospitals	Contributes to effective cost containment
5. Increasing Private-Sector Involvement	Contributes to the creation of a level playing field	Creates a competitive environment

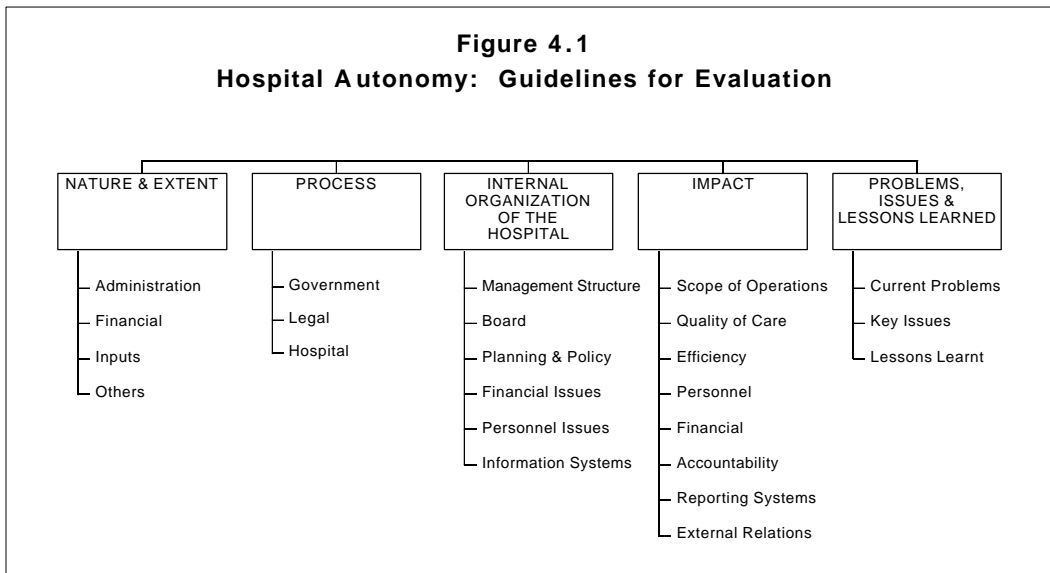
3. Guidelines for Evaluating Hospital Autonomy

Various strategies to make hospitals more autonomous may offer a means to both effecting a gradual reallocation through reducing the financial burden of hospitals on governments and strengthening the efficiency and effectiveness of public hospitals. However, autonomy may also have an adverse effect on such hospital characteristics as costs, efficiency and cost-effectiveness, technical and perceived quality, patient satisfaction and acceptability, equity and access, and accountability. This chapter presents a guide for assessing the benefits of autonomy, the various trade-offs involved in implementation, the determinants of success, appropriate sequencing of changes, the complimentary strategies required to reinforce new administrative mechanisms, and the cost of the changes needed to bring about greater hospital autonomy. The objectives of these guidelines are (a) to describe the approach which has been taken to increase hospital autonomy; (b) to assess the effects of increasing hospital autonomy; and (c) to analyze the factors which contribute to success or failure of autonomy, where success and failure can be defined in terms of implementation or in terms of the effects of policy.

Thus, the important issues in evaluating hospital autonomy are:

1. What is the nature and extent of its autonomy? Who has authority to set policy and carry out management activities?
2. What is the process by which autonomy has been extended to the hospital?
3. How have the hospital management, organization or internal systems and practices been structured or changed over time to reflect the level of autonomy the hospital has?
4. What has been the impact of autonomy to date?
5. What have been the implementation issues in the extension of autonomy to this hospital? How far along is the hospital in implementing autonomy? What lessons have been learned about implementing a policy of expanding autonomy? What factors can we identify as contributing to the successful implementation of a strategy to expand hospital autonomy?

**Figure 4.1
Hospital Autonomy: Guidelines for Evaluation**



Study Design

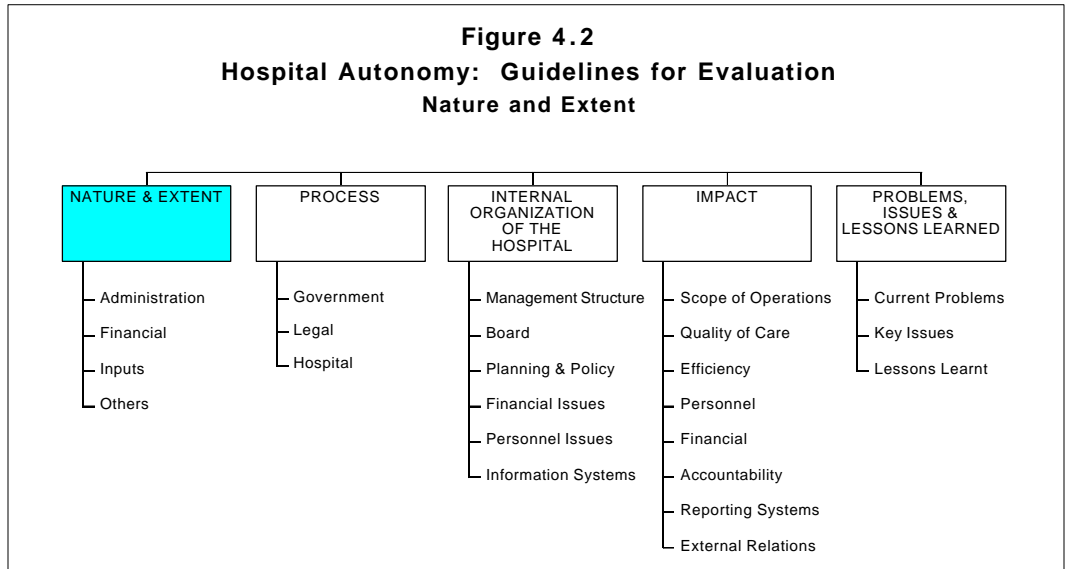
The unit of analysis can be a single hospital, a number of hospitals or an organization of hospitals. Where sufficient information is available, it may be possible to assess hospital performance over time. This kind of time series analysis will be particularly useful if it could be spread over from the period before autonomy was granted to the period after autonomy. Where autonomy in more than one hospital is being evaluated, cross-sectional studies may yield interesting and meaningful comparisons.

Table 4.1

Study Design

	<i>Single Case: One Hospital</i>	<i>Multiple Cases: Many Hospitals</i>	<i>Organization of Hospitals</i>
Cross-Section Analysis	<ol style="list-style-type: none"> 1. Evaluation of one autonomous hospital. 2. Comparison with a similar not-autonomous hospital. 	<ol style="list-style-type: none"> 1. Evaluation of a number of autonomous hospitals. 2. Comparison within the selected sample. 3. Comparisons with similar not-autonomous hospitals. 	<ol style="list-style-type: none"> 1. Evaluation of the organization. 2. Evaluation of at least one constituent hospital of the organization. 3. Comparison with hospitals outside the organization.
Time-Series Analysis	<ol style="list-style-type: none"> 1. Evaluation of one autonomous hospital. 2. Before autonomy/ after autonomy study to draw comparisons. 	<ol style="list-style-type: none"> 1. Evaluation of a number of autonomous hospitals. 2. Panel data analysis to draw within-sample and over-time comparisons. 	<ol style="list-style-type: none"> 1. Evaluation of the organization. 2. Evaluation of at least one constituent hospital of the organization 3. Panel data analysis to draw within-sample and over-time comparisons

Information collected to evaluate the impact of autonomy is of four types: quantitative data, reports or other documentation, responses in interviews, and direct observation by the study team.



The Nature and Extent of Autonomy

The starting point of the evaluation is the determination of type and extent of autonomy. As discussed earlier, autonomy can be described along the dimensions of nature and extent. For each hospital, the current level of autonomy can be summarized according to table 4.2. Comments (footnoted on the appropriate line and compiled at the end) should offer either additional information on the extent of autonomy, identify differences by subcategory within the category listed, or identify differences between formal responsibilities and structures and actual processes and how they operate. For example, if the Board nominally has control over the budget, but has spent no time reviewing the administrator's budget before approving it, this should be noted as a comment.

In addition to the information on the table, cases where the hospital has been given authority but has not yet exercised it should also be identified.

The information collected according to table 4.2 can then be used to obtain an indication of type and extent of autonomy.

The Process by which Autonomy is Extended to the Hospital

The next issue of interest is the process by which the hospital, or the organization of hospitals, obtained autonomy. Both government and the hospital play a significant role in this process. Within the government there are the issues of decision-making regarding the type and extent of autonomy; an assessment of the likely impact of autonomy on government's finances, administration and people; political issues such as support and opposition from different groups; legal issues such as those concerning the existing laws of the land and the need for change; and personnel-specific issues that concern government employees in the hospitals. Similarly, there are many process issues within the hospital, such as the relationship between the physicians and the management under autonomy; support and opposition groups within the hospital; and structural and administrative changes that autonomy is likely to bring. These and related issues are summarized below.

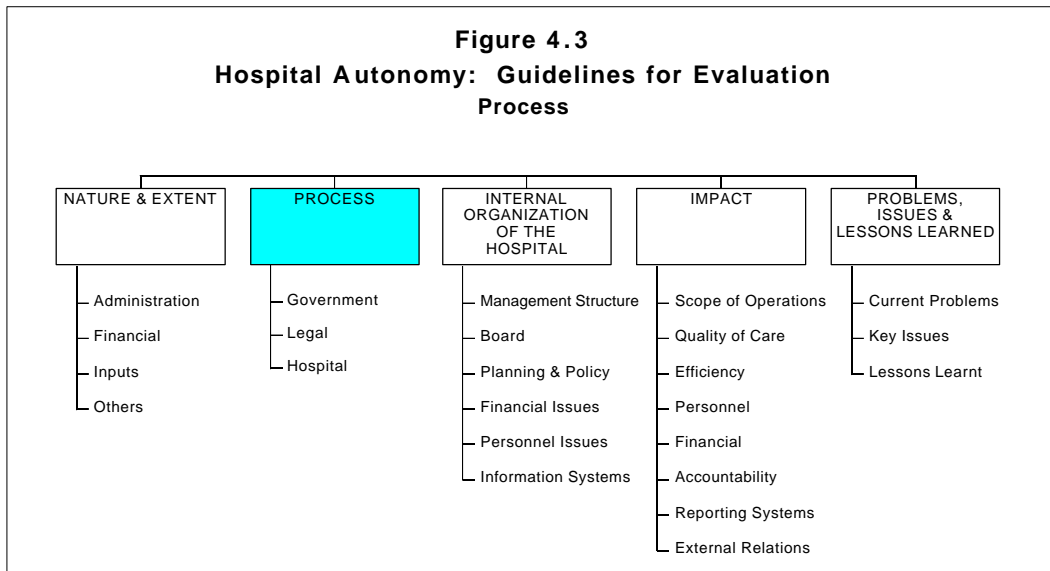
Government Level

1.
 - a. When was the decision to provide greater autonomy made?
 - b. Why was it made?
 - c. In what form (degree and type) was the increased autonomy planned?
2.
 - a. What impact was expected from increased autonomy on:
 - Hospital
 - Finances
 - Administration
 - Health sector
 - Finances
 - Administration
 - b. Who would benefit/lose from this decision?
 - By how much?
 - c. What were the symbolic consequences of the autonomy decision?
3.
 - a. Why was that particular time chosen?

Methodological Guidelines

Table 4.2
Characteristics of Autonomy

<i>Function</i>	<i>Current Status</i>	<i>Legal Basis</i>	<i>When Changed</i>	<i>Prior Status</i>
Administration				
Board				
Exists				
Appointed by				
Scope and Authority				
CEO				
Appointed by				
Reports to				
Revenue				
Ministry of Health				
Basis of Payments				
Who sets fee?				
Hospital controls fee?				
Hospital retains?				
Who bears risk?				
Institutional Budgeting				
Recurrent				
Staff				
Supplies				
Other				
Capital				
Plant				
Equipment				
Other				
Inputs				
Personnel				
Levels				
Salaries				
Benefits				
Recruiting				
Training				
Firing/Dismissal				
Drugs				
Supplies				
Medical				
Nonmedical				
Equipment				
Purchase				
Maintenance				
Contracted Services				
[list and identify:]				
Who Contracted				
Who Supervises				



- b. What transitions that influenced the timing were occurring in:
 - Government
 - Organizations affected by policy
 - Broader political & economic environment
- c. What was the relationship of autonomy to other reforms?
4. a. Who were the major participants in the decision?
- b. What were the roles of:
 - Government
 - Political parties
 - Hospital
 - Private sector
 - Academic sector
 - International agencies
 - Donor groups
 - Hospital personnel
 - Public opinion

- For each party:

Did it support/oppose/NA

Strength of support/opposition

Reasons for position

Power/impact on final policy

- c. Note any special role played by donor groups.
- d. Other key parties? If so, describe role and impact.
- 5. a. How did government get all these players on board?
- b. What mechanisms were used to block/overcome opposition?
- c. What mechanisms were used to build support?
- 6. a. Were any new laws required?
- b. What statutory powers, responsibilities and obligations did the autonomous hospital have?

Hospital Level

- 1. a. When was the decision to increase hospital autonomy implemented?
- b. Who was responsible for implementing the autonomy plan?
- c. What changes occurred in the original plan during implementation?
- 2. a. Which individuals and groups in the hospital supported the autonomy plan?
- b. Who opposed it?
 - For each player:
 - how important was the decision to each of these players?
 - what reasons were given for supporting/opposing the move?
 - how strong was the support/opposition from each group?

- c. Were there non-mobilized players, who, if mobilized, could influence future plans?
3.
 - a. How did the hospital management get all these players on board?
 - b. What approach(es) was (were) used to implement the plan?
 - c. Which individuals/groups were the management able to influence?
 - d. What form did this influence take?
 - e. What mechanisms were used to contain/overcome opposition?
4.
 - a. How was the hospital affected by the change in terms of:
 - structure and functioning?
 - financial management?
 - professional and interpersonal relationships?
 - physician-patient relationships?

Tools of political mapping can be used to describe and explain the process by which autonomy was extended to the hospital. Political mapping provides a "six-step procedure for describing the issues, key players, resources, and networks involved in a specific health policy decision" (Reich, 1994). The first step describes the effect of the health policy along the dimensions of identity, size, timing, and intensity of the effects. The second step identifies the opponents and proponents of the health policy. The third step identifies the major organizations and individuals in the decision-making processing, and assess the impact of the policy on these organizations and individuals. The fourth step identifies the formal and informal linkages between organizations and individuals involved in the policy. The fifth step makes an assessment of the major changes in the responsible organization, and covers the general organizational and the political environment. The sixth and final step analyzes the strategies for influencing the decision.

Changes in Management, Internal Systems and Practices

The internal structure and management of the hospital is likely to change to reflect the level of autonomy. The structure of management under direct government control would need to be changed to accommodate the additional responsibility and accountability of the organization, particularly with respect to administration, finance, and services. In addition, the hospital is now likely to have a new board, with a different composition and structure than it previously

had. Planning and policy functions and information systems will also change with autonomy. These and related issues are summarized below.

Management Structure

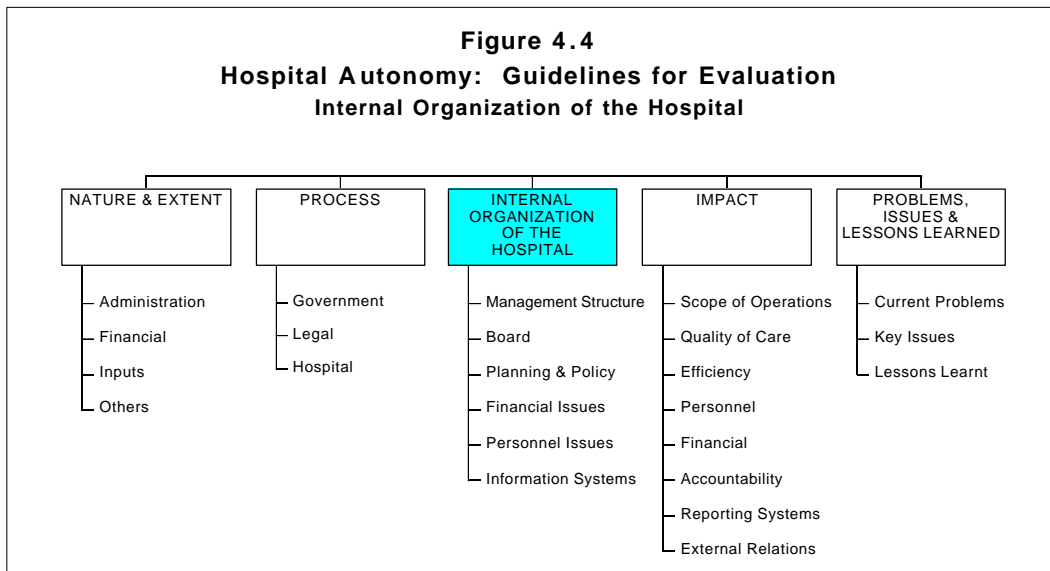
1. What is the current structure for hospital management of:
 - a. Administration
 - b. Finance
 - c. Medical Services
 - d. Nursing Services
 - e. Support Services
2. Was this changed due to changes in autonomy?
3. If so, how did these change?
(For each, to what extent was the reason for change because autonomy required better systems or because previously desired autonomy permitted the hospital to implement improvements?)

Board Composition and Structure

1. What is the Board composition and structure?
2. Was the Board changed due to changes in autonomy?
(For each, to what extent was the reason for change because autonomy required better systems or because previously desired autonomy permitted the hospital to implement improvements?)

Planning and Policy Making

1. Have any planning or policy making processes been created or augmented as a consequence of the expansion of autonomy?



(For each, to what extent was the reason for change because autonomy required better systems or because previously desired autonomy permitted the hospital to implement improvements?)

Financial Issues

1. Have any of the following systems been created or improved in response to increased autonomy:
 - a. Financial reporting/Accounting systems
 - b. Auditing practices/systems
 - c. Billing

(For each, to what extent was the reason for change because autonomy required better systems or because previously desired autonomy permitted the hospital to implement improvements?)

Personnel Issues

1. In response to increased autonomy, have there been any changes in:
 - a. Office Staff
 - b. Hiring/Firing Protocols and Practice
 - c. Compensation policies

- d. Personnel evaluation systems
 - e. Personnel management/assignment systems
 - f. Training activities
2. In response to increased autonomy,
 - a. Has the hospital identified any new positions needed as a result of autonomy?
 - b. Have these positions been filled?
 - c. How long did it take to define the position and complete the hire? What accounts for the long/short time period needed?
 3. In response to increased autonomy,
 - a. Have any changes been made in the systems by which compensation levels for employees are set?
 - b. Have any systems of incentive compensation been introduced?
 4. In the period following autonomy, has there been any change in trade union activity within the hospital?

(For each, to what extent was the reason for change because autonomy required better systems or because previously desired autonomy permitted the hospital to implement improvements?)

Information Systems

Have any of the following systems been created or improved in response to increased autonomy:

- a. Financial reporting/Accounting systems
- b. Management information systems
- c. Clinical information systems

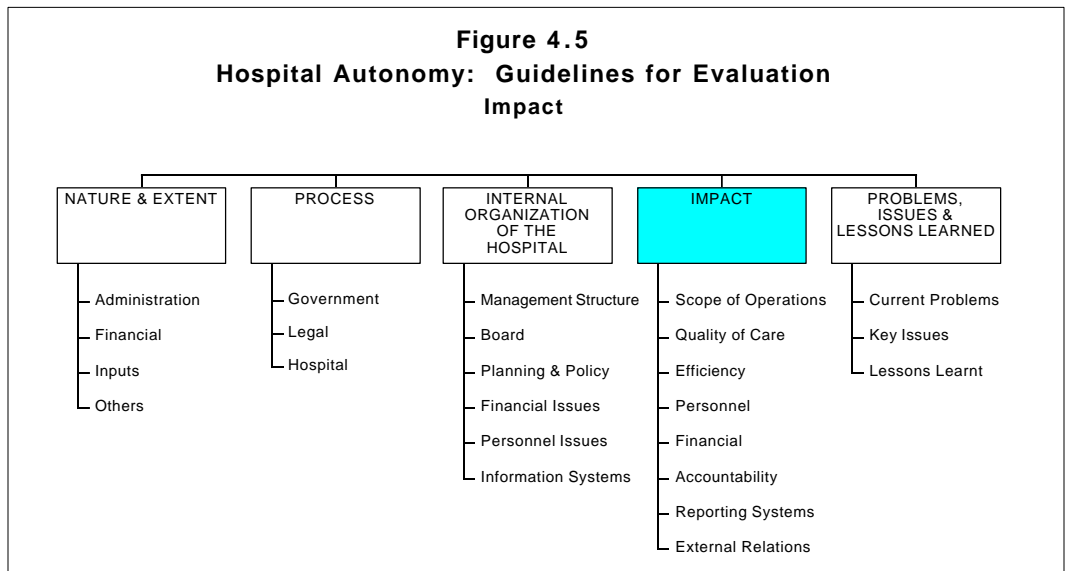
Impact of Autonomy

In this section we discuss the impact of changes in hospital outputs, performance and relationships as a result of autonomy. Hospital autonomy is likely to affect:

- Scope of Operations

- Quality of Care: Structure and Process
 - Staff Availability and Productivity
 - Equipment Availability
 - Availability of Drugs
 - Availability of Supplies
 - Maintenance/Cleanliness
 - Patient Access
 - Patient Satisfaction
- Quality of Care: Outcomes
- Cost, Efficiency and Financing
 - Cost Efficiency
 - Financing
- Staff Processes Within Hospital
 - Productivity
 - Morale
 - Discipline
- External Relationships
 - Accountability
 - Community involvement and accountability
- Reporting systems
- Financial reporting/auditing
- Changes in Relationships
 - Government
 - Donors
 - Other hospitals
 - Medical School

We will discuss each of these in turn.



Scope of Operations

1. Has the hospital added, discontinued or changed the scope of the any service, such as:
 - a. Inpatient Services
 - b. Medicine
 - c. Surgery
 - d. Pediatrics
 - e. Maternity
 - f. Psychiatry/Mental Health
 - g. Other Outpatient Services
 - h. Casualty
 - i. Specific Clinics
2. Has the hospital changed the basis for referral to the hospital?
3. Has the hospital changed the basis for admission to the hospital as a:
 - a. Private patient
 - b. Government paid patient
 - c. Government nonpaying patient

4. Has the hospital changed its role in the health care system relative to other providers in the period after autonomy? Was the ability to do this influenced by the change of autonomy?
5. Has the hospital changed its teaching role as a result of autonomy?

Quality of Care

Changes in quality of health care can be evaluated in terms of the effects of an intervention on structure, process, and outcome (Donabedian, 1980). These can be judged along six different dimensions: effectiveness, acceptability, efficiency, access, equity, and relevance (Maxwell (1984, 1992). This three-by-six classification (table 4.3) gives eighteen "cells", or cross-dimensions, and each cell gives information on two dimensions: where (structure, process, outcome) and what indicator of quality (effectiveness, acceptability, efficiency, access, equity, relevance). Quality of care may be assessed by judging each cell against an established or tested norm, and progress can be assessed by comparing the cells over time.

Quality of Care: Structure and Process

Physical state of the facility and the equipment, the administrative process, qualifications, experience and training of the medical and nonmedical staff, and accreditation of the hospital are structural issues affecting the effectiveness of hospital services. Patient acceptability of hospital services is affected by comfort, courtesy, privacy, counselling etc. Appropriate levels of staffing and equipment are likely to affect efficiency parameters, while location of the facility may have some impact on access issues. All these are structural issues in the quality of care paradigm. On the process side are issues like technical management, diagnostic testing, preventive medicine, patient education, general administration and organization, capacity, etc. It is not always easy to separate structure and process in a complex organization like a hospital, and often it is convenient to assess both together.

1. Staff Availability and Productivity (Physician, Nursing, Other Medical, Administrative, Other)
 - a. Examine trends in staff by staff category over time in:
 - Aggregate numbers of staff
 - Ratio: staff/patient day
 - b. Are there shortages of any categories of staff? If so:
 - Category

- Reason for shortage
 - c. Have staff shortages gotten better or worse during the period of autonomy?
 - d. Were there areas of overstaffing in the past?
 - If so, what areas? How has autonomy influenced overstaffing?
 - e. How has autonomy influenced the ability to retain staff?
 - f. How has autonomy influenced the ability to recruit staff?
 - g. How has staff training been influenced by autonomy? Are staff better/worse trained?
2. Equipment Availability (for departments such as Nursing Wards, Radiology, Pathology, Laboratory)
- a. Is needed equipment available?
 - b. Has availability improved or worsened over the autonomy period?
 - c. When equipment breaks down, how long does it take typically for repairs to be made?
 - d. Has the time it takes to get repairs made gotten longer or shorter over the autonomy period?
 - e. How has the process for getting equipment repaired changed over the autonomy period?
 - f. Has it become easier or harder to upgrade or purchase new equipment over the autonomy period?
 - g. How has the process for purchasing equipment changed?
3. Availability of Drugs
- a. Are prescription drugs generally available?
 - b. Has the availability of prescription drugs gotten better or worse over the period of autonomy?
 - c. Has the process for obtaining prescription drugs changed over the period of autonomy?
 - d. Has the time for obtaining prescription drugs increased or decreased over the period of autonomy?

Table 4.3
Quality of Care

	Structure	Process	Outcome
Effectiveness	facilities, equipment, administrative processes, qualifications of medical staff, etc.	clinical history, physical examination, diagnostic tests, technical competence, preventive management, continuity of care, etc.	patient recovery, restoration of function, survival, etc.
Acceptability	physical comforts, cleanliness, privacy, counselling, etc.	explanation of treatment, patient education, etc.	follow up for improvement, meetings, etc.
Efficiency	appropriate staffing and equipment levels, etc.	administration, organization, staffing, operational arrangements, etc.	comparison of costs for similar cases across different units and time periods
Access	location, etc.	capacity, etc.	treatment of wait-listed patients, etc.
Equity		bias in treatment, etc.	bias in outcomes, etc.
Relevance	usefulness of resources, need for specific services, etc.		impact on health status for different groups of people, etc.

4. Availability of Supplies
 - a. Are supplies generally available?
 - b. Has the availability of supplies gotten better or worse over the period of autonomy?
 - c. Has the process for obtaining supplies changed over the period of autonomy?
 - d. Has the time for obtaining supplies increased or decreased over the period of autonomy?
5. Maintenance/Cleanliness
 - a. Is the hospital generally clean?
 - b. Has cleanliness increased or decreased during the period of autonomy?
 - c. Are Plant/Fixed and Movable Equipment well maintained?
 - d. Has maintenance increased or decreased in the period of autonomy?
6. Patient Access

- a. In the past, were there any waiting lists for services? Are there any now? Have the waits gotten longer or shorter?
- b. Has the hospital expanded or reduced access to the facility for:
 - Paying patients
 - Government paid patients
 - Government nonpaying patients
 - For which services? Rationale?
- c. Do patients or their families perceive that access to care is now: excellent, good, poor? Do patients or their families who have had experience using the hospital five years ago perceive that access to care is now: better, worse, about the same? Do they rate access to care five years ago as: excellent, good poor?

7. Patient Satisfaction

- a. On a scale of: excellent, good, poor, how do patients or their families rate the following;
 - Quality of care
 - Quality of nursing
 - Quality of physical plant
 - Food service
 - Cleanliness of the facility
 - Overall satisfaction
- b. For patients or their families with experience getting care from the hospital five years ago, do they feel that each of the following have gotten better, gotten worse, or stayed about the same:
 - Quality of care
 - Quality of nursing
 - Quality of physical plant
 - Food service
 - Cleanliness of the facility
 - Overall satisfaction

- c. For patients or their families with experience getting care five years ago, how do they rate the care five years ago in each of the following areas:
- Quality of care
 - Quality of nursing
 - Quality of physical plant
 - Food service
 - Cleanliness of the facility
 - Overall satisfaction
- d. Has the hospital conducted any surveys or measures of patient satisfaction? If so, what are the results?

Quality of Care: Outcomes

Patient recovery, follow up for treatment, and impact on health status for different groups of people are some of the outcome issues that are important for assessing quality. Effectiveness in outcomes can be evaluated by looking at indicators of patient recovery and survival, or alternatively at mortality rates in the hospital. Patient acceptability can be assessed by using indicators of follow up visits for improvement. Cost and case-mix comparisons over time may give some idea of changes in efficiency. Equity and access may be assessed by looking at the hospital use across income groups, gender, age, race, and diseases and conditions treated in hospitals.

1. What is the trend of mortality rates?
 - a. Hospital
 - b. Ministry of Health[by service, over time]
2. What percentage of patients are recalled for follow up for treatment and improvement? Is there any change in the frequency of follow up cases after autonomy?
3. What is the hospital utilization across income, gender, age, race, diseases and conditions? Is there any change in hospital utilization after autonomy?

Efficiency

Ultimately, the main plank against which performance will be assessed is the hospital's capacity to deliver high quality clinical care at least cost. Some measure of efficiency can thus be obtained by measuring costs and examining the relationship of costs to services provided.

Hospital costs include recurrent costs (such as maintenance, rent, utilities, personnel, catering, laundry, linen, and costs of diagnostic, therapeutic, and other treatment services provided to the patient) and capital costs (such as land, buildings, plant and equipment). Hospital services are traditionally measured by the number of outpatient visits, and the number of inpatient admissions and discharges. Traditional hospital service indicators are:

- The bed occupancy rate, which is a measure of the percentage of total available beds which are engaged by patients during the year;
- The average length of stay, which is defined as the average number of days a patient remains in the hospital between admission and discharge; and
- The bed turnover rate, which refers to the average number of inpatients per bed per year.

One approach to evaluating efficiency is to select performance indicators such as cost per bed day, output of services, rate of return on capital, etc. and then examine the performance of the hospital in relation to the indicator. It is important to note, however, that the effectiveness of unit cost studies can be seriously undermined by differences in the completeness of data used, and variations in the health, institutional, and economic environment. In order for a study comparing costs per unit of output to indicate which hospital is most technically and economically efficient, the following criterion must hold : (a) the case mix at each hospital must be the same or have been accounted for; (b) the quality of service must be the same or adjusted; and (c) the cost information must take into account the social opportunity costs of resources used. In the absence of these conditions, efficiency implications of unit cost measures are indeterminate or hard to interpret with confidence. High unit costs may be a reflection of a number of things such as high quality, poor efficiency, or the characteristics of patients. On the other hand, low unit costs could be indicative of poor quality or high efficiency.

Further, ratio analysis is usually limited to the ratio of one output per one input, and it is difficult to account for situations where multiple inputs create multiple outputs. For instance, cost per admission or per bed does not distinguish acute from long term patients. Likewise, a comparison between hospitals where one is below or above the mean unit costs raises problems of objectively deciding which hospital is inefficient.

Finally, it is often not easy to distinguish between changes arising from the

structure of the reform and those arising from the fact of reform. Indeed, organizational changes often lead to improvements in productivity regardless of the nature of the changes themselves. Likewise, it is not easy to control for the effect of other changes, like increased financial resources, that are likely to influence the direct indicators. In such cases it is not straightforward to attribute changes implied by the indicators to the policy of granting greater autonomy.

Nevertheless, information on hospital revenues, expenses and operating statistics is always useful.

The information collected above can then be used to compute the following:

1. Cost and Cost/Efficiency
 - a. Cost/admission
Cost/day
Length of stay, overall & by service
Occupancy rate, overall & by service
 - b. Per diem costs
Budget/detailed expense data can be used to estimate per diem costs for individual departments and/or functions over time:
 - Nursing salaries and wages
 - Other salaries & wages
 - Food
 - Radiology
 - Laboratory services
 - Drugs
 - Other medical supplies
 - Nonmedical supplies
 - Surgery charges
 - c. Is there any evidence that increased autonomy has affected the hospital's ability to deliver care more efficiently or at lower cost?
 - d. How do hospital administrators believe increased autonomy has affected their ability to deliver care more efficiently or at lower

cost? What examples do they cite?

2. Financing
 - a. How have sources of financing changed in period of autonomy?
 - b. Is financing more or less stable in period of autonomy?

Personnel: Staff Processes within Hospital

Autonomy may lead to a number of changes in the staff processes within the hospital. Employees of a government hospital are usually government employees with all legal and statutory support that the government extends. With autonomy, however, these employees may be transferred to the newly created autonomous body and may cease to be government employees. This change in status may affect productivity, morale and discipline of employees, and can affect performance of the hospital.

1. Has there been any change in employment conditions of the hospital staff after autonomy?
2. How has autonomy influenced:
 - a. Productivity

Table 4.4
Hospital Revenues, Expenses and Operating Statistics

	Years (to be completed as far back as possible)
Revenues Recurrent MOH User Charges Patients/Insurance Government Patients Private Patients Donors Other Capital MOH Donors Other Expenditures By service, if available Inpatient Outpatient [If available in greater detail, collect, create new categories and enter] By Expenditure Category Salaries [by employee category if available] Employee benefits and other compensation Drugs Supplies Medical Nonmedical Maintenance Other Recurrent [provide additional detail if available] Capital Plant Equipment	
Operating Statistics Beds, set up and staffed [collect by service if available] Admissions [collect by patient sponsorship if available] Maternity Paying Nonpaying] Patient Days [same structure as admissions] Outpatient Visits [collect by casualty/clinic if available] [collect by patient sponsorship if available] Other Services [units of service] Extension services Prevention services Family Planning Services Well-baby clinics Lab Test Personnel (full-time equivalents, if available) [data can be reported in categories such as: Physicians Nurses Nurses Aides Technical Staff Maintenance and Clerical Staff Administration]	

b. Morale

c. Discipline

(for physicians, nurses, other medical personnel, administration, nonmedical staff, etc.)

Accountability

An autonomous organization may be in a better position to respond to local needs and requirements, and involve local communities in making decisions in their local health services in a more direct and immediate way. In many developing countries, structures already exist at the district and village levels for facilitating community involvement. Community involvement and participation can be assessed by examining the frequency and records of meetings, follow up activities, and direct inputs into the planning process.

Community involvement and accountability

1. What organized community groups are active in the area?
2. Have they expressed desire to meet with hospital administration?
3. Has hospital administration expressed desire to meet with community groups?
4. How frequently does hospital administration meet with community groups?
5. Are any records of meetings kept?
6. Is there follow-up action after meetings? Examples.
7. How has hospital functioning or goals/objectives changed as result of community participation?

Reporting Systems

The delegation of authority may be accompanied by a matching system of control and supervision to monitor and ensure the responsible use of authority. These controls can include requirements of regular and periodic reporting and monitoring of some performance indicators.

1. General
 - a. What kinds of reports is hospital required to file with the government? How frequently have these changed with autonomy?

- b. How frequently do government representatives meet with hospital administration? Has this changed with autonomy?
 - c. What follow-on action is taken on basis of reporting system or meetings? Has this changed with autonomy?
2. Financial
- a. What financial reporting and auditing processes are in place at the hospital?
 - b. How have these changed in the autonomy period?
 - c. Are any changes planned? Time period?

External Relations

The relationship of a hospital with the government, donors, other hospitals and medical schools is likely to change after autonomy. While ownership would continue to be vested in the government, the distancing of the locus of control and supervision would effectively give a new identity to the hospital. Similarly, the donors will no longer treat the hospital as being part of the government; instead, their interaction with the hospital will become more direct. Other hospitals and the medical schools may also revise their relationship with the hospital as a result of autonomy.

1. In the period of autonomy, what changes have occurred in the hospital's relationships with:
 - a. Government, MOH, MOF, Treasury
 - b. Donors
 - c. Other Hospitals
 - d. Medical School

Factors Contributing to the Success of Hospital Autonomy

There are several issues that are critical to the successful implementation of hospital autonomy. Based on the information obtained in the previous sections, many problems and issues related to autonomy can be identified. For example, the inexperience of hospital management, lack of preparedness, mismatch of skills, poor information systems, and community demands on an autonomous institution may have an adverse effect on the performance of the autonomous hospital. It is useful to document and understand the process by which the hospital resolves these issues.

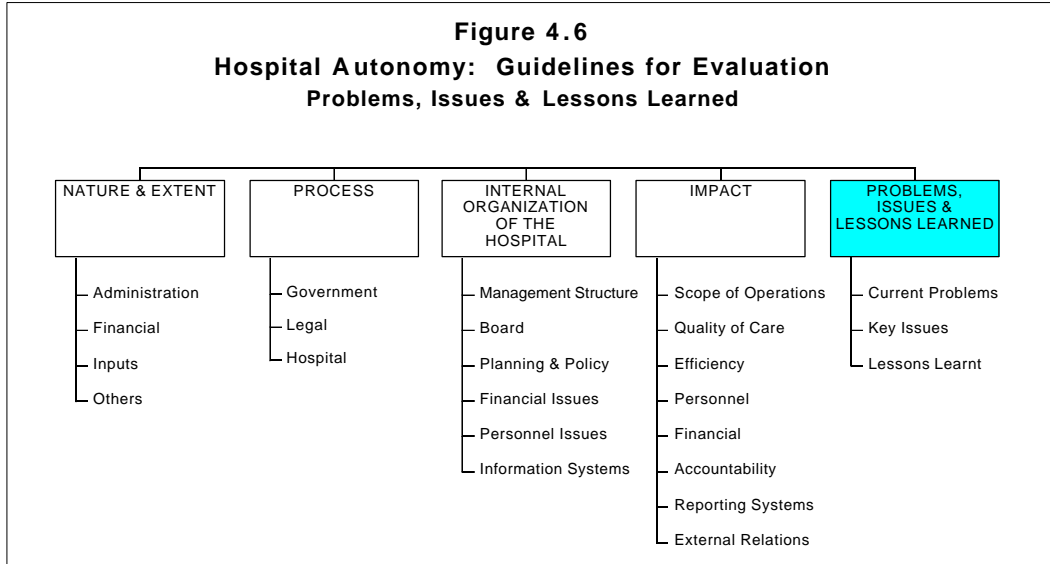
1. What problems or issues is the hospital currently confronting related to changes in autonomy?

(Examples of issues: Board inexperience; Staff skills and new needs not matched; Information systems not in place, etc...)
 - a. Nature of issue
 - b. How arose
 - c. Impact on hospital
 - d. Plan, if any, for resolving
2. What problems or issues related to changes in autonomy emerged in the past that have been resolved?
 - a. Nature of issue
 - b. How arose
 - c. Interim impact on hospital
 - d. How resolved
3. What was the role of donors as a catalyst for increased independence and efficiency of the hospital?
4. What factors and resources are needed to make autonomy successful?

How important were the following?
 - a. Leadership
 - b. Institution building
 - c. Health system changes that support or reinforce autonomy (e.g., new funding)
 - d. Financial stability
 - e. Appropriate legal framework (define)
5. What were the most important lessons on implementation? What recommendations can be made for other hospitals or countries considering expanding hospital autonomy?

4. End Note

These guidelines discuss some broad parameters along which hospital autonomy can be evaluated. Needless to say, there will be many differences between country situations, and within a country, between hospitals. Guidelines such as these cannot hope to identify in advance all the various issues that will arise in the course of the investigation, neither is that the intention. The objective is to provide a relevant framework that has the added advantage of flexibility so that country and facility specific situations can be taken into account in the process of evaluation. Within this caveat, we hope that these guidelines will provide a useful framework for evaluation of autonomy in public hospitals, and will inform and guide health sector policy reforms in general.



Appendix: Country Experience

Several countries have had experiences with hospital autonomy. However, available data and analysis of these experiences is mostly confined to developed countries. Moreover, these discussions on hospital autonomy are often based on different concepts of autonomy, and obscure variations in a country's political, economic, and cultural circumstances. Further, the number and types of indicators used vary between studies, and the computation processes tend to be somewhat unique. Nevertheless, these experiences are of great relevance to developing countries, and a study of these form an important component of formulating guidelines for effecting autonomy in hospitals in developing countries.

Denmark

Hospital services in Denmark have historically been provided through regional authorities. The county council is the administrative unit making organizational decisions and setting financial constraints on the hospital. The central government does not interfere in any significant way; in fact its role is limited to decisions regarding the location of certain clinical specialities covering more than one county. Hospitals are financed primarily by taxes, and by block grants from the central government.

The organizational structure of Danish hospitals can be seen as a combination of vertical and horizontal institutions. Vertical institutions refer to the establishment of rules within an hierarchical structure. On the other hand, hierarchical relations are absent in horizontal institutions.

Before the reforms of mid 1980s, the hospital administration had three main players: the managing director, the matron in-charge of nursing services, and the consultants. The managing director was responsible for infrastructural concerns such as technical services, administration, and laundry. Also, the managing director was overall responsible for maintaining the budget, but had little power to influence spending. Spending was controlled by vertical hierarchical structures, like that of the nursing services, or by the horizontal structures, like that of the consultants. A fair amount of effective autonomy therefore existed even before any reorganization took place.

Management reforms in the 1980s kept the three main players, but sought to change the relationships between them. The reformed system now includes a managing director, a chief nurse taking the place of a matron, and an appointed chief physician. These three together constitute the top management team. Their functions include overall coordination across departments, budgetary decisions, and interaction with the government. Management on the department level is now given extensive authority to make decisions on current business and financing. They manage an envelope budget through which money can be spent as needed. Department managers can further change the rank-and-file structure within the department subject to the two restrictions that they cannot create new positions and they cannot expand permanent staff without permission.

Essentially, therefore, the reforms unified the power and responsibility structure at the top management level and granted greater financial and personnel autonomy to departmental managers. This granting of autonomy to the departmental managers is accompanied by an increase in responsibility, particularly with respect to maintaining costs and output levels.

Pallesen and Pedersen (1993) analyze the impact of these reforms in three hospitals in three different regions between 1989 and 1992. Both accounting and production statistics are used to assess the economic behavior of the hospitals. Their analysis has three main components. First, they evaluate the influence of institutional constraints on economic performance of the hospitals. Second, they examine the changes in economic activity due to departmental budgeting reforms in 1991. Finally, they analyze changes in the aggregate output level of the hospitals resulting from managerial restructuring. Costs were divided into three different kinds: staff-costs, bought-in-services including transportation and maintenance, and merchandise. Budgetary items were also divided into staff, drugs, and other expenditures, and output indicators used were number of inpatients, bed days, and number of outpatients. Hospital records were the chief source of data.

An analysis of total costs during the period between 1989 and 1992 indicates a cost reduction of about 1.7 percent, using 1989 as a base year. The biggest change was in expenditure on bought-in services, which decreased by as much as 34.2 percent, largely through internal provision by own staff. Staff costs increased by 3.9 percent, and merchandise costs decreased by 5.8 percent. Within staff costs, physician and nurse staff costs increased by an average of 8.9 percent, while the cost for other clinical workers remained constant and infrastructure expenses decreased by 1.6 percent. Similarly, budgeting reforms resulted in an overall reduction of spending by departmental heads.

In the absence of prices, Pallesen and Pedersen (1993) use traditional output indicators such as bed days, number of inpatients, and the number of outpatients. They find that over the period 1989-92 there was a downward

trend in the number of bed days, an expanding number of outpatients, and a constant number of inpatients. Using 1989 as a base year, bed days at the three facilities decreased by 5.5 percent, inpatient episodes increased by 0.8 percent, and out patient attendances increased by 5.8 percent. No firm conclusion about any correlation between departmental autonomy and departmental output is possible from this data.

The effect of management reform is also tested using aggregate data. Pallesen and Pedersen (1993) combine total output and total cost, and compute total output per cost unit. They find that total output per cost unit actually declined by 14% after introduction of the management reform.

A preliminary assessment of the Danish experience suggests a correlation between departmental autonomy in management and budgeting, and output levels. The number of patient days decreased with managerial autonomy, and costs per output declined.

France

Hospitals in France prior to 1984 were administered in a rather indifferent manner. There was no strategic planning, and many important decisions were not attended to. There was lack of information and data, and the hospitals seemed unaware of the demand for their services. Physicians who wanted either more beds or an increased level of technology were required merely to ask the manager, who, in turn, granted their requests. Much of the information needed to assess hospital performance and address population needs was lacking. No efforts were made to contain costs, and the hospitals were soon engulfed in a severe economic crisis.

The main thrust of hospital reforms in 1984 therefore was to decrease costs. A two-pronged strategy was engaged for this purpose. First, global budgets with cash limits were introduced. Second, a managerial reform of hospital administration was suggested. We look at managerial reforms in some detail.

Managerial reforms started in 1984 with the Ministry of Health in France setting up regional and local authorities, who in turn set standards for hospital admissions, transferring patients to community care, and needs of medical disciplines. In 1988, the National School of Public Health instituted the 'Laboratory for research in hospital management.' This organization had three primary goals: to promote a doctrine to help hospital management address concerns raised by the new global budget limitations; to apply this doctrine in a real case and to generalize results so as to be helpful to other managers; and to build a case study helpful to school training. According to suggestions made by the laboratory, a group of five hospital managers was established to begin the

research: three administrators and two public health doctors from local and regional authorities, one Social Security official, two representatives from the Ministry of Health, and one school faculty member. The research group considered both the planning model and the strategy model, and decided on the strategy model method. The next step was to build an information system appropriate for strategic planning by both hospitals and regions. The sources of information included hospital reports and data collected routinely by regional authorities. Data on population, objectives and values, supply of services, required personnel and equipment for each level of neonatal care, as well as economic status of the region was used. Drawing from this information, the research group established a simulation model which allows participants to play the role of hospital manager or official within local or regional authorities, and systematize the decision-making process of regional authorities. This model is used as a training scheme for hospital managers.

The model uses information on both the environment as well as the organization. Environmental factors are factors exogenous to the organization, while the organizational factors are endogenous to the organization. Opportunities in the environment are matched against strengths and weaknesses of the organization to develop a feel for the areas and types of competitive advantage. The alternative choices are then examined with respect to the type and value of proposed activity.

The impact and effectiveness of this kind of a simulation model have yet to be assessed. It is clear, however, that the emphasis on planning has changed significantly the priorities and functioning style of hospital managers in France.

Holland

Until 1983, hospital financing in Holland was characterized by a system of retrospective output reimbursement. Under this arrangement, hospitals were automatically reimbursed for every medical activity. Budget deficits could be solved by increasing charges per person, and both physicians and management had an interest in maintaining long hospital stays. There were no incentives for hospitals to minimize costs.

Two attempts were made to contain costs under retrospective reimbursement. The first strategy included supply side controls on hospitals. Planning was improved through various policies which regulated the supply of health care facilities. This policy tried to reduce costs by restraining induced demand within the hospital sector. While this prevented further excess growth of health care facilities, it failed to reduce the volume of services. The second cost containment effort was a restriction on setting rates. This policy was opposed because hospitals construed it as a threat to their autonomy, and ultimately

failed. High costs in the hospital sector therefore continued to characterize the health system in Holland prior to 1983.

In 1983, the government of Holland instituted a major reform in the method of financing hospitals which changed the system from retrospective reimbursement to global budgeting. Global budgeting meant that each hospital now received a yearly proposed budget limit. Several important assumptions underlie the belief that budgeting results in lower hospital costs. First, budgeting encourages hospital efficiency by creating appropriate incentives for hospitals. This assumption presupposes a second one: that hospitals under retrospective reimbursement operate inefficiently. The third assumption maintains that budgeting will not adversely affect the quality of hospital care. While physicians have argued that global budgeting forces unnecessary cost limitations, there is also a possibility that quality may improve due to a reduction in overstay. Fourth, global budgeting presupposes a certain amount of autonomy so that there are choices available to managers. Hospital boards and managers must also be capable of implementing these changes. Cost containment, the desired goal of global budgeting, thus rests on these several assumptions.

The system of budgeting in Holland has undergone several changes since its inception in 1983. In the first year, a hospital's budget was determined by its level of expenditure in the previous year, 1982. This is a problematic method. First, hospitals which had unusually low expenditure levels in 1982 got penalized. Second, hospitals which had high levels of expenditure were given less incentive to reduce operation costs. In 1985, the government introduced a distinction between fixed and variable costs into the system. Two capacity measures were used to determine a hospital's fixed costs: number of hospital beds and number of specialist units. Number of admissions and patient days were used to measure variable costs. A second revision of global budgeting was instituted in 1988. This involved the notion of functional budgeting, which effectively meant that hospitals receive the same budget for the same functions.

Maarse (1989) evaluated global hospital budgeting in Holland using four criteria: effects on cost containment, effects on the delivery of health care, effects on hospital policy-making and organization, and the effects on the public-private mix of health care. Maarse recognizes two methodological concerns regarding the measurement of cost effectiveness. The first is a problem of ascertaining whether reductions in costs are attributable to global budgeting. Other possible reasons for cost reductions could be inflation, the introduction of new medical technologies, or the demand for medical care. A second difficulty concerns the difference between net and gross outcome effects. Both of these were taken into account. On the macroeconomic level, a comparison of actual cost trends with the budget limits shows that marginal costs have decreased as a result of the budgets.

With regard to hospital services, Maarse (1989) concludes that hospital

admissions decreased. The average length of stay fell from approximately 15 days in 1976 to 12 days in 1986. Data analysis does not indicate an increase in ambulatory care.

Hospital budgeting resulted in important changes in policy-making and organization of hospitals. This includes changes in strategic policy making, management information systems, and integration. The introduction of management information systems provided relevant information about the effectiveness and cost of medical activities. Finally, the interaction between physicians and decision-makers improved. Physician involvement in the decisions of a hospital are known to be useful in determining certain hospital operations, like purchasing of equipment.

The final criterion for evaluating global hospital budgets is the public-private mix. Budgeting can have important implications for the distribution of tasks between public and private facilities. The effectiveness of budgeting is dependent, in part, on the relaxation of certain public regulations and an increase in hospital autonomy. This can be seen in an effort to decentralize hospital management. Maarse (1989) notes that changes in the mix of public and private hospital provision become evident only after several years; the effects of global budgeting on the public-private mix have therefore yet to be determined.

Italy

Following the end of fascism with World War II, Italy's 1948 Constitution emphasized political as well as social entitlement. Health care became an inalienable social right. The state was committed to providing health care to all; at the same time linkages between health care, other social services, and long-term economic development were clearly defined. One important subcomponent of the total system is the hospital.

Hospitals in Italy have historically been affiliated with religious, charitable, and other philanthropic organizations. This pattern has characterized public as well as private hospitals. In 1948, democracy led to the devolution of power to newly established regional authorities, and hospitals emerged as autonomous entities with administrative independence. These independent hospitals functioned as private enterprise, and their delivery of services followed the diverse social, cultural, economic and political characteristics of the country. Often characterized as a non-consensual society, the inner conflicts along geographical, demographical, religious, class, and ideological lines are evident in almost all spheres of large-scale social activity. Hospitals have not been an exception.

In 1968, Italy began health care reforms brought about by: a greater realization

of these issues and a renewed commitment of the government to provide minimal level of services to all, decrease inequalities in health care delivery, organize and distribute services to all defined sections of the population, strengthen delivery of primary care, and improve the general efficiency and efficacy of the health system. These reforms strived to increase the accountability of hospitals to the government to target specific populations, address concerns regarding equity, and increase hospital efficiency. In this sense the case of Italy is unique, for these reforms aimed at regionalization rather than decentralization, and sought a greater role for the government, rather than granting more autonomy.

The 1968 health care reform legislation focused on administrative and structural facets of hospitals within a framework of regionalization efforts. The legislation created hospital agencies which were provided a juridical status. These agencies, either under the state or central government, controlled several hospitals, and were responsible for the maintenance and cure of the sick. A regional hierarchy of hospitals was created, which classified hospitals according to the number of patients served as well as the number and types of specialties. Three levels of hospitals were created: zone, provincial, and regional hospitals. Zone hospitals are the most basic in terms of specialties, and serve the smallest population. They have a department of medicine and surgery, and of obstetrics and pediatrics. Provincial hospitals have more specialized services and a higher degree of departmentalization. They generally have an internal pharmacy and departments of radiology, anatomy, pathology, microbiology and anesthesia. Regional hospitals, of which there must be at least one within each region, serve the greatest population, and have the highest degree of specialization. In addition to those specialties offered by provincial facilities, regional hospitals have a minimum of three highly specialized medical or surgical divisions such as plastic surgery, cardiology, or thoracic surgery. Specialized institutions operate additionally on either the provincial or regional level. Their classification depends on the number of beds, technical organization, catchment area, and diagnostic and treatment capabilities. The overall classification of hospitals within a region is made by the executive branch of the regional government in cooperation with the recommendations of the Provincial Health Council.

In addition to creating a regional hierarchy of hospitals, the 1968 reform legislation addressed internal structure and administrative concerns of hospitals. A primary concern for hospital administration is accountability, and the reforms sought to address this concern. The Administrative Governing Council, the governing body of these hospitals, was made responsible for drawing up the institutional character of the hospital, addressing any activities relating to personnel, overseeing agreements for interinstitutional cooperation, and performing functions related to the hospital's budgetary, fiscal, judicial, and planning responsibilities. The Council elects, from among its members, an

official who legally represents the hospital agency, and who presides over the Council's meetings. The Ministry of Health has ultimate jurisdiction over both the Administrative Council and its president. Another body, the Health Council, consisting of elected members of the medical staff, offers professional advice into hospital policy. It serves the role of advising decision-makers on affairs such as the purchasing of equipment, personnel credentials, and charges for professional services. The president of the Administrative Council functions as a liaison between the administrative board and the medical staff by attending all Health Council meetings. Finally, financial control is enforced by the College of Auditors, represented by members of the Ministries of Treasury, Health, Labor, and Social Security, and by a representative of the regional government.

This cumbersome system of planning, implementation and supervision turned out to be ineffective from the beginning. To start with, difficulties in arriving at a national health plan had a negative impact on the regional planning structure. Second, there was a lack of clarity concerning the division of power between the central and the state authorities, which created a great deal of confusion. Third, there was no incentive structure in place, and the regional bodies saw no rewards in taking action. Finally, the involved process of decision-making took away any enthusiasm or responsibility from those involved. The result has been an irrational growth of institutions, a low bed per population ratio and hospital overcrowding, relatively long average lengths of stay, and unequal distribution of hospital beds along cultural divisions. Rising costs coupled with equity and quality concerns continue to plague the health system.

In this atmosphere of crisis, the government instituted the next set of reforms in 1974. These reforms had two major planks. One, they sought to alleviate the financial problems of the hospitals. Two, they sought to grant greater autonomy to regional authorities. In effect, therefore, the centralization strategies in 1968 were quickly dropped in favor of a more decentralized structure, a middle-of-the-road approach, as it were. However, the real gains have been small, largely because of the rapid politicization of the regional bodies. Furthermore, multilevel problem solving systems still remain in force, and real authority and responsibility continues to be absent. In essence, therefore, the failure of hospital reforms in Italy are a reflection of the political divisions, fragmentation, clientelism and competing lines of authority evident in Italy.

New Zealand

Public provision of health services has been an important component of New Zealand's ideology since 1938. States were responsible for funding public services through a weighted population-based formula according to which funds were distributed to 14 Area Health Boards. These Boards, in turn, gave money to health centers in their area. General practitioners were permitted to charge

user fees, although the government funded much of their activity. Private practices and institutions were not prevalent until the 1960s when the government, faced with dwindling resources, encouraged private practices by giving bed subsidies. User fees accounted for approximately 50 percent of private hospital treatment charges. The government, through an organization called "Vote:Health", contributed 100% of public hospital expenditure, 75% of pharmaceutical, and 25% of private hospital treatment. Public insurance funded 8% of private hospital treatment, and private health insurance contributed 15% of private hospital expenses.

In 1991, the government of New Zealand published a report in which it listed what it considered to be the eight fundamental problems with New Zealand's health system. The list included long waiting times at hospitals, a fragmented funding system, problems with access to services, conflict in the roles of purchasers and providers, constraints on Area Health Boards to implement changes, the lack of control by consumers, the lack of assistance for physicians making decisions, and equity concerns. These eight fundamental problems, the government concluded, were the result of misguided incentives within the health care market. The right kind of incentives were not present, while the wrong ones were. This list included, for instance, the lack of incentives by physicians to choose less expensive procedures for patients, incentives for patients to substitute hospital services in place of general practitioners, incentives for the Area Health Board to fund high profile hospitals instead of cost effective community care, incentives to move long term patients to private care thereby shifting costs onto the Department of Social Welfare, the lack of incentives for hospitals to gather information which would help determine the cost effectiveness of certain procedures, a lack of response to public demand, a disincentive by the Area Health Boards to contract out, and a lack of innovation in the health sector in general.

In 1991 the government announced reforms which it anticipated would address some of the problems with the health system. The reforms were to take place between 1992 and 1994, and included seven components. First, the government would establish four Regional Health Authorities (RHAs) which would be responsible for purchasing all primary and secondary health services for their regions. Funds to RHAs would be channelized through the Ministry of Health instead of the three previous public sources: Vote:Health, Vote:Social Welfare, and the Accident Compensation Corporation. Health care services would be provided by 26 groups of large public hospitals, smaller community hospitals, and private hospitals, which would compete for the funding of their RHA. The RHA would also be permitted to fund certain specialities. RHAs would be directly responsible to the Ministry of Health. Second, the government would develop a list of 'core' services which it considered vital. Third, middle and high income groups would be charged a user-fee. The purpose of these charges was

both to help finance services and to create the appropriate incentives for seeking hospital care. Fourth, the government allowed the transfer of personal annual entitlement to alternative health care plans. The intent here was to persuade physicians to be more responsive to patient demands. Fifth, the government would place more of an emphasis on public health goals, which are generally more long-term than other health services. Sixth, there would be an increased surveillance of the training of health personnel and physicians. There would also be a greater attempt by the Department of Health to monitor the quality of health care. Finally, the RHA would be encouraged to find alternative funding arrangements in order to establish provider incentives. These may include capitation, risk sharing, or budget holding contracts.

Pim Borren and Alan Maynard (1994) evaluate New Zealand's health system reforms along the lines of efficiency and equity. Theoretically, the purchaser-provider split is intended to encourage competition among hospitals and give an incentive to hospitals to reduce costs and increase market share. In practice, however, many areas are limited in terms of alternatives, and even in urban locations, hospitals tend to specialize in certain areas so that they will be able to retain a share of the market regardless of competition. Furthermore, the split between purchaser and provider increases hospital management and administration costs.

Improvements in technical efficiency occur when hospitals compete for quality rather than price, and New Zealand's health reforms fail to create this incentive. New Zealand's health system reforms seem to be restricted entirely to increased competition. Social efficiency is measured by society's valuation of the last dollar spent on health compared to the last dollar spent on any other public or private good or service. The New Zealand reforms do not introduce a mechanism for measuring society's satisfaction with public spending on health services, and therefore fail to take social efficiency into account.

Concerns over equity in New Zealand's reforms are addressed by the 'core' services guarantee. This leaves unanswered questions about the definition of equity, and whether the government intends to assure equal access for equal need, or rather equal usage for equal need. Reforms aimed to increase user charges for middle and higher income groups; yet the increase in charges is regressive rather than progressive.

It is still too early to reach any firm conclusions about the extent and impact of reforms in New Zealand.

Singapore

For the most part of Singapore's history, the health care system was based on a heavily subsidized government structure financed through taxation. This health care structure was the remnant of the one established by the British colonial

government. In May 1981, the newly appointed Minister of Health expressed the desire for health care reform. Beginning in 1982, the Singapore government devised a plan to restructure the health care system and by February of 1983, the National Health Plan (NHP) was presented. The NHP aimed at promoting healthy life-styles by improving health care services in a cost-efficient manner through a series of disease prevention programs. The NHP introduced the concept of Medisave where health services are financed through the Central Provident Fund (CPF). Medisave allowed the account holder and members of his immediate family to withdraw savings from the Medisave account to pay for hospital cost. This new finance method shifted health care cost from the government to the individuals, families, and employers. In May 1984, the restructuring extended further to include the administrative structure of the government hospitals. The managerial staffs of the hospitals were given more authority and greater flexibility in organizing their staff and setting local standards. The government hoped that this increased autonomy would provide more incentive to improve the quality of health care services in a cost efficient manner.

In the midst of an economic recession in the mid-80s, the Singapore government sought to cure the economy by transferring the responsibilities of economic growth from the public sector to the private sector. In his budget speech in 1985, the Minister of Finance introduced the idea of privatization. The 1986 Report of the Economic Committee suggested that the health care system, along with various other industries, be deregulated and privatized. The report called for the development of private medical facilities and the subdivisions of specialized care. The government had plans to eventually develop Singapore into a training center for specialists. Since privatization was so strongly endorsed by the Report of the Economic Committee, the Public Sector Investment Committee was formed in 1986 to hammer out the details of how the privatization of the health sector could be achieved. By 1987, the main goals of privatization were set. These goals included the withdrawal of the government from commercial activities that could otherwise be provided for by the private sector, the reduction in competition between the government and the private sector, and the improvement of the Singapore Stock Market through secondary distribution of government owned stocks.

The health care reform in Singapore included both the restructuring of the hospitals and the privatization of the health care industry. While reconstruction refers to "the redevelopment of public hospitals along corporate lines and in itself", privatization is "any process which restricts or reduces the public sector's involvement, or encourages competition from the private sector, in the nation's economic activities". Both of these processes represented separate aspects of the change in the health care system of Singapore.

When the policies to restructure the hospital were implemented, a great deal of anxiety was experienced by the public. People feared that the increasing health care costs from the restructuring would reduce their access to basic health care. The National Trade Union Congress was worried that when the Singapore General Hospital converted into a restructured hospital, the workers would lose their eligibility for medical benefits at the hospital. The public felt that the government had abandoned its duty as the public health care provider and thrust them into the hands of the profit maximizing private sector. Moreover, as the system became more decentralized and managerial responsibilities became more localized, some top health administrators became uneasy because they felt like they were losing control over the system.

The reconstruction of the first six departments took place in January of 1989. By April of 1990, the management responsibilities of the hospital shifted from the Ministry of Health to the Health Corporation of Singapore Pte Ltd. (HCS), a new government-owned company. Although each reconstructed hospital was an incorporated subsidiary of HCS, they were owned and controlled by the government. In a sense, the restructured hospitals were still considered government hospitals. Employee benefits could still be obtained from the restructured hospitals. If the employers did not pay for their workers' medical bills, the employees could take their employer to the Industrial Arbitration Court. The new health care structure made the payment of government subsidies more complicated. Unlike the old system where subsidies were directly granted, the new system required more administrative procedures. Under the new system, it was harder to administer the subsidies and figure out who were the ones that needed it most. No set formula was devised to calculate the subventions needed. As for-profit hospitals, the private hospitals had more lucrative profits and are in a better position to pay high salaries than not-for-profit hospitals. As a result, of the 260 physicians that left the public hospitals, 140 of these physicians joined the staffs of private hospitals between 1986 and 1988.

The impact of the developmental changes of Singapore's health care system was summarized in the speech given by the Permanent Secretary (Health)/Director of Medical Service. While the population of Singapore has increased 12.5% in the past ten years, total hospital admission has risen 47% but hospital beds have increased by only 8%. While government health expenditures have increased in nominal value, they have remained consistently at one percent of the GDP in real terms, which comprised 6% of the total government recurrent expenditures. Since the implementation of the NHP in 1985, private consumption of health care has increased proportionally from 1.7 times to more than 2 times as much. This increase in private hospitalization is in part due to the availability of Medisave accounts. The misconception that unused Medisave savings would be kept by the government, has caused the abusive use of Medisave funds since 1984. A recent DBS Bank report showed that between 1984 and 1989 medical costs had increased at the rate of 3.5% annually relative to the 1% increase in CPI.

While being efficient implies maximizing output, cost effectiveness emphasizes maximizing gain with limited resources. Unlike efficiency where growth is the only concern, cost effectiveness deals with distribution factors as well. In the health care market, where the aim is to improve the health status of the entire population and not just better the production of health care, cost effectiveness is more important than efficiency. Evidence has shown that the desired cost-saving was not achieved by the NHP. Restructuring of the hospitals was met by increasing health care costs. To recover these costs, the government and the private sector both adjusted their fees upward. As a result, prices skyrocketed rather than declined. Moreover, studies have shown that privatized hospitals incur a higher cost than government hospitals.

In the process of trying to generate more revenue and be more cost effective, inequity often results. Vertical inequity was observed in the two-tier system created by the NHP. Under the new NHP, the accessibility of health care often depends on ability to pay rather than need. While people who can afford the hospital charges often go to the private or restructured hospitals, most of the poor citizens continue to obtain care from the government hospitals. Although people who could not afford health care services on their own continue to be subsidized by the government, their treatment has declined in quality relative to that of the wealthy. When the poor try to obtain service at restructured hospital, they get inferior treatment. They are placed in the 'C' Class beds, while the ones who can afford to pay for their own health care are given 'B' and 'A' Class beds. Horizontal inequity can be seen in the widening income gap among the physicians. In May of 1989, Singapore General Hospital Pte Ltd. removed the ceiling of payments physicians can charge patients. By September 22, 1989, all of the government owned hospitals followed this policy for fear that non-compliance would result in an influx of physicians from the public sector to the private sector. This measurement not only widened the income gap between different specialties, it also reduced the incentives for training and research.

One of the major problems in privatizing the health care market is that the health care market does not behave like a perfectly competitive market. Factors such as imperfect information and entry barriers often limit competition. Areas of health care that are not subject to these constraints can be more easily privatized. In Singapore, non-clinical hospital services such as food services and laundry, non-acute basic and generic services, and the market for luxury services such as cosmetic surgery have already evolved as separate markets from the public sector.

Very little data was found in analyzing the successfulness of the National Health Plan in Singapore. From the data that was available, it appears that restructuring of the hospitals increased health care costs, private consumption of health care, and inequity. On the positive side, the NHP has improved the accessibility of information. More extensive studies need to be done to better understand the Singapore health care system.

United Kingdom

The National Health Care Service (NHS) refers to the health care system of the four countries which comprise the United Kingdom of Great Britain and Northern Ireland. This includes England, Wales, Scotland, and Northern Ireland. Established in 1948, the chief objective of the NHS is to ensure health care for all regardless of ability to pay. Prior to reforms, the NHS was organized along various levels. At the top was the Department of Health and Social Security which worked with Treasury to distribute money to regional authorities, who then allocated funds to the districts. Each of the four countries was divided into regions. Regional Health Authorities (RHA) were responsible for formulating regional plans and providing administrative and planning support to member districts. They were further responsible for funding community health councils, monitoring performance, determining district budgets, and holding hospital consultants' contracts. Each district, run by District Health Authority (DHA), served approximately a quarter of a million people. The DHAs, while financed by RHAs, had the majority of responsibility for providing health services. DHAs funded several special health authorities as well as family practitioner committees. The central government financed all health services through tax revenue.

The majority of hospitals in the United Kingdom are operated by the government, under the responsibility of DHAs. This includes approximately 2,800 hospitals with a total of about 390,000 beds, and employs over 800,000 nurses, physicians, and other staff members. Senior clinicians have much of the responsibility for running the hospital. Each clinician is usually assigned to one hospital and has a designated number of physicians and hospital beds to oversee. A clinician can exercise monetary control over a hospital's finances.

Following its publishing of the "White Paper, Working for Health", in 1989, the government began to introduce a series of reforms directed at altering the provision and financing of health services in the United Kingdom. This was attempted primarily by increasing the level of competition in the provision of state financed health care. Two motivational factors compelled these changes. The first was a belief that competition would be an effective method of achieving greater efficiency in the NHS. The second maintained that health care delivery would respond effectively to need, and that this could best be addressed at the local level. Reforms targeted hospital services, general practice, and community care. The main elements of reform are the creation of an internal market through provider/purchaser split, the establishment of self-governing trusts, and the development of hospital autonomy. The reforms also include the introduction of new general practitioner contracts, which defined their role and established performance targets. The goal for general practitioners is to

determine standards and contain costs. Community care is also being changed under the reforms. Services for the old, the mentally ill, and the mentally handicapped have been introduced to market mechanisms under the purchaser provider split. As a final measure, the reforms have introduced a tax relief on the private insurance premiums paid by those over sixty years old.

The provider/purchaser split is one of the central instruments of the NHS reform. Under this system an internal market is created, within which purchasers and providers contract with one another to supply health care. Although there were concerns that this set up would give both the purchaser and the provider the incentive to not accept patients with conditions that might require expensive treatment, this concern has proved to be excessive. Since any treatment which costs more than 50,000 was paid for by the district providers, there was no need for the fundholders to reject high-risk patients. In a sense, the patients' needs were better heard through the fundholders. Unfortunately, this system removed the incentive for the fundholders to treat the patients as illness arises. The doctors therefore have the incentive to delay referrals until the illness is serious.

In addition, hospitals are permitted to apply to the secretary of state to become self-governing trusts. In the transformation of key providers from Directly Managed Units into independent trust, the hospital assets are shifted away from government control and toward the new trustees. Since the NHS reform in 1989, 500 trusts have been placed in operation, providing 95 percent of all hospital and community health services. Although the growth is fast, it is not uniform throughout the country. The hospitals which choose to remain state-managed have a managed budget as well as volume and quality targets. In any case, clinicians in both types of hospitals are encouraged to participate in management decisions. The establishment of independent trusts has, in effect, given the hospitals the opportunity to increase managerial autonomy.

In the process of decentralization, the roles of the NHS personnel function have changed. Before the reform, management responsibilities, such as working conditions, employee pay, and staff mix, all resided within the national health authorities. After the reform, however, the providers' income was determined by the purchaser of the service and not the regional budget. This, increased the flexibility of local managements. One of the challenges for the management after the reform was cost containment. Since the NHS reform, the health care market has become somewhat more competitive. In order to remain competitive in the market, local managements have to find ways of reducing labor costs. Most managements realized that the most efficient way to reduce labor cost was by changing the staff mix through skill substitution and alteration. As a result, a large change in the staff composition can be observed during the early years of the reform. The pay structure, on the other hand, was slow to change. Although the Directly Managed Units were able to set local pay for HCAs by 1990, most

of the trusts and DMUs continued to pay their employees by the Whitley and Review Body Rate. Lacking the resources and skills to determine pay locally, the managements were unable to immediately alter the pay structure to local needs after the reform. The pay structure is expected to change and be determined locally as the departments acquire the skill to do so. Although the power within the hospital is slowly being shifted to the general managers, much of the internal management is still controlled by the clinical directors. Since the administrative responsibilities are shared by the general manager and the clinical director, the objective of the hospital is not always clear and is often influenced by the bargaining process of the two units.

Although the elderly population in the United Kingdom is on the rise, the provision of NHS continuing care beds has declined over the years. Long-stay geriatric beds have decreased from 58,000 in 1978 to 53,000 in 1988. When the change in the social security regulation allowed people to use their social security payment to pay for private residential and nursing care in 1990, the health authorities further decreased their responsibility for funding long-term non-acute health care for the elderly. Unable to gain access to local service and unable to finance private nursing care, many elders have to travel far from home to receive care and many have to settle for less than high quality care. When budget transfers from social security funds to local securities were capped in April 1993, local authorities were made responsible for the budgets of the networks. The cost shifting between the health authority and the local authority has resulted in bed blocking. This is an example of when financial difficulties of the reform overshadow the objective of high quality care for all.

To observe the impact of the reform, various evaluations were made by various research groups along the lines of quality, efficiency, choices, and equity of the new health care system. The study by Jones, Lester, and West between 1990 and 1992 shows that the availability of primary care and drugs have increased since the reform. Primary and community care were becoming more accessible through appointment systems and telephone contact. Drug prescriptions and consultation for patients over 75 years old have also increased. These improvements in quality, however, were credited to GP contracts and Patient's Charters rather than reform. GP Fundholding practices have bettered the quality of care by opening communication with secondary care providers, shortening waiting periods, and speeding up direct access services such as pathology and radiology. By surveying 2400 elderly people discharged from the hospital, the same research group observed no improvements on the quality of non-clinical hospital services, such as food quality and sanitation. Although the patients had to wait longer for hospital treatment in 1992 as compared to 1990, the hospital staffs were making a positive effort to communicate with patients.

In the health care market, efficiency is often measured in terms of cost-minimization while maintaining a certain level of quality. By looking at the

CIPFA Health Databases for 1989/90 and 1990/91, one can see that for the most part trusts have incurred a lower hospital cost and unit operational cost relative to non-trusts, with the exception in the occupational therapy department, where the unit costs for non-trusts are higher. Personnel changes that result from decentralization did not seem to have an effect on efficiency. In the postal survey of district health authorities in England and Wales, Buchan and Seccombe found that although the staff composition of the hospitals have undergone revisions since the reform, it did not have any significant impact on the cost and quality of care. Even though administrative and general management costs have increased due to the reform, Glennerster and colleagues speculate that the efficiency gain from fundholding outweighs the cost.

The reform does not seem to have had any significant effect on patients' choice of hospitals and doctors. In a survey done by Mahon, Wilkin and Whitehouse, three quarters of the GPs surveyed said that the reform did not increase their choices of referrals. The Oxford study showed similar results. Eighty percent of the fundholders say that they will not change their referral pattern after the reform.

Although one of the aims of the NHS reform is universality of care based on need and not the ability to pay, this objective has not always been achieved. In fact, in more cases than not, inequity was observed. Whitehead's studies on the fundholding and non-fundholding practices in various areas illustrated that an inequitable two-tier service was created by the provider/purchaser split. To attract fundholding customers, the hospitals often sign special contracts with fundholders, which provide them with preferential treatments, such as shorter waiting periods and better quality treatment at lower costs. The NAHAT 1992/93 financial survey of district health authorities illustrated that the fundholders were receiving too much money at the expense of the providers and the district. The fundholding practices received up to four times as much computer reimbursement per practice than that of non-fundholding practices. This further led many consultants to convert their practices to ones that only cater services to the fundholding practices. Although this increased access for some patients, it placed the patients that were not associated with fundholding practices at a disadvantage. Many of them will have to travel an extra distance to see a specialist. Glennerster and colleagues believe that the inequality between the fundholding and the non-fundholding practices is only a transitional phase that will pass once all the GPs become fundholders.

Not only was inequality observed in the provider/purchaser split cases, it was also seen in the changes in the resource allocation after the reform. Before 1991, the standardized mortality ratios were employed when calculating the need for health services. Areas with high mortality ratios were thought of as being less privileged, and received more aid. In 1991, the Department of Health devised a new formula for calculating the mortality ratio. The new formula

adjusts the age of the population by taking the square root of its standardized mortality ratio, under 75 years of age. Since the most deprived areas were composed mainly of a younger population, this new age weighted formula shifts resources from these deprived areas into the retirement areas. In many incidences, the treatment received by the people were inversely related to their needs.

The reform can be further analyzed by an indirect economic approach. In this investigation, the reform is examined through the market structure, availability of information, and transaction costs. The case study performed by Barlett and Harrison in 1993 showed that the health care market is far from being competitive. Since the health care market is composed of a single purchaser and few large providers, the market has limited competitive effects. The only area where competition is observed is among the fundholders and the health authorities. The area of information assessment has been slow to develop. Very little information is available in terms of waiting periods, quality of care, and the conditions of contractors. Bartlett and Harrison predicted in 1993 that the purchasers will continue to rely on their own providers for information. In the study by Appleby and colleagues, the ex ante and ex post transaction costs were compared between DHA and fundholders. While the ex ante transaction costs were low with DHAs because contracts were in block forms, the transaction costs for fundholders were higher because it is on a cost-per-case basis. Conversely, the ex post transaction cost for the fundholders were lower than that of non-fundholders because being closer to the patients makes the fundholders better judges of contract compliance. Since ex post costs tend to be higher than the ex ante cost, the transaction costs for fundholding practices are often lower than transaction costs of the non-fundholding practices.

Although many efforts had been made to analyze the success of the NHS reform, the results obtained up to date are not very conclusive. Many other changes in the management and policies of health care in NHS made it difficult to isolate the true effect of the reform. Moreover, since relatively little information is available on the health care system before the reform, it is difficult to make an accurate assessment of the improvements of the NHS after the reform. All in all, it is too early to draw definite conclusions on the progress of the reform.

United States (California)

Under California law, the local government has an obligation to provide health services for the poor. Most counties chose to met these obligations by setting up county hospitals. However, increasing demands for these services combined with inadequate resources for funding led to a major rethinking of the health care production and delivery system. The growth of private health insurance, the reimbursement policies of Federal programs such as Medicare, income tax laws,

dwindling federal resources, and fluctuating support in California for county health services, all had the combined effect of raising costs and making it difficult for the counties to continue to provide hospital services. As a result, the county administrators sought to dissociate themselves from the management or ownership of their county hospitals. While many hospitals were closed down or transferred to medical schools or to district authorities, several others were contracted out to private parties. In particular, between 1972 and 1980, 15 counties entered into management contracts with private enterprise to manage the hospitals on behalf of the county.

The management contracts generally maintained that, for a specified annual fee, the firm will provide an administrator, controller, and specialized consultant services as needed. Specialized services may include development of a billing and collection system, the preparation of Medicare reports, and improvement of data collection. Annual fees ranged from \$60,000 to \$80,000 for smaller hospitals in rural areas to \$500,000 per contract for large, urban hospitals.

Shonick and Roemer (1982) will evaluate the managed hospitals according to the criteria of costs, administration, quality of services provided, the effect on public accountability, and implications for the long run. The hospitals in the study included two small hospitals of 50 to 60 beds each serving a predominantly rural area, three middle-sized hospitals of 100 to 200 hundred beds which served suburban populations or agricultural counties, and two large hospitals of 200 to 300 hundred beds located in metropolitan areas. The study followed the hospitals' performance during the fiscal years 1976 through 1979.

The two small rural hospitals experienced a small initial reduction in net county costs primarily due to improved accounting and billing procedures, and a closer review of Medicare records. The financial effects of contracts on the three medium sized hospitals were varied. The management of one of the hospitals claimed credit for improving the hospital's financial position by negotiating a capital loan. In another, the private management was able to effect sizeable and long term reduction in net county costs. These accomplishments were attributed, in part, to improved billing and collections, maximizing reimbursements, and increasing hospital occupancy rates. The two large urban facilities were unable to improve their financial status through contract management. In one of the hospitals, the contract was limited to consultation. In the other hospital the private management was not able to remedy the deep social and economic community difficulties underlying the hospital's financial situation.

The small rural hospitals most clearly exemplified the administrative benefits of contract management. These rural facilities often had difficulty recruiting administration personnel with the range of skills needed to effectively operate a modern hospital. Management firms offered this personnel both in number and in skill level. In larger facilities, this difference is less evident. The primary

constraints to improved administration across hospital size seemed to be the ability to overcome limitations imposed by county governments. Management firms were no more successful in overcoming these barriers than county administrators. An important factor is therefore the ability of the county government to delegate power and responsibility. Clearly, management contracting without the accompanying ability to take financial and managerial decisions is not an effective mechanism for improving the administration of a public hospital.

There was no evidence suggesting that the existence of management contracts restricted access to hospital services. However indirect evidence suggests that the stringent billing and collection system may have dissuaded persons from seeking ambulatory hospital care. Outpatient services decreased, while inpatient care remained constant. Quality of care, as assessed from interviews with hospital staff and outside observers, remained constant for the most part across hospital size and location, with the exception of one hospital where capital improvements improved plant and equipment.

There is, therefore, mixed evidence of the benefits of contract management on hospital performance in the case of California county hospitals. However, it must be noted that this study is a short-term study, and no long-term effects of management contracts can be ascertained from the data available.

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