A New Era in Costing and Budgeting: Implications of Health Sector Reform in New Zealand

Manzur Alam and Stewart Lawrence
University of Waikato, Hamilton, New Zealand

Introduction

The recent developments in the public sector in New Zealand, and especially in the health sector, offer a context for the study of the role and importance of accounting technologies in achieving organizational change. The changes that are being proposed for the health sector in New Zealand involve extensive organizational rearrangements. Since July 1993, Crown health enterprises (CHEs) have been legally required to operate as successful businesses in a newly created (pseudo) marketplace. The effectiveness of these rearrangements appears to require a large-scale investment in new accounting and information systems, and new approaches to costing and budgeting. From a research point of view, such a period of change provides an excellent opportunity for studying the development of new accounting and budgeting systems as an integral part of managerial processes in organizations. The view taken in this article is that to understand accounting systems it is necessary to study the organizational context within which they are designed and operated.

It has been claimed that the reforms in the health sector in New Zealand follow the English model, but go beyond that and constitute an ambitious high-risk strategy[1]. Driving the reforms is the Government's market-oriented philosophy and a declared aim to reduce state spending and lower the proportion of GDP accounted for by Government and quasi-government agencies. To achieve the Government's objectives, a new accountability has been demanded.

This article examines the move towards a commercialized, economically driven, health sector in New Zealand. More particularly, the aim is to show how accounting technologies and practices are an integral part of these changes. The economic arguments provide a context for accounting change. Equally important, as Hopwood[2, p. 128] argues: "accounting can itself provide a specificity to conceptions of the economic which enable it to infuse and change organizational and social affairs". This specificity has been noticeably absent in the health sector in New Zealand. Also in the National Health Service (NHS) in Britain, at least until recent extensive reforms, the language and practice of accounting had only rarely infused managerial and clinician deliberations and decisions[2, p. 137]. The reforms in New Zealand aim to change the culture of health-care providers by introducing new accounting and budgeting methods.

International Journal of Public Sector Management, Vol. 7 No. 6, 1994, pp. 41-51. © MCB University Press, 0951-3558

Health Sector Reforms in New Zealand

Traditionally, health services were provided in New Zealand in accordance with need. The Government still accounts for nearly 80 per cent of all public expenditure in New Zealand and such funds are collected through taxation. But with the gradual worsening economic situation and a decline in economic indicators during the 1970s, there has been an increasing concern with the role of Government in the provision of public services. Concern over funding and overall efficiency in the health sector initiated several studies. While problems in the health system[3,4] suggested the need for some changes in the institutional framework, the direction of change was motivated by the Government's ideological shift to economic market mechanisms. The Gibbs report[3] succeeded in focusing attention both on the institutional arrangements of health-care delivery and on hospital efficiency. The report argues: "What is more important, it has to do with the inability of the present system to react to changes in preferences and the difficulty it has in moving resources around".

The previous system was alleged[5] to be inefficient as it could not establish proper accountability systems. Resource allocation and accountability were focused on budget allocation based on identifying and tracing inputs. Accountability was seen as compliance with legal and administrative procedures. The Gibbs report[3] specifically questioned the inefficiencies of health-care delivery concerning poor management performance, lack of management information, and the need to create competitive tendering for health. Subsequent changes[6] in the health sector reflected such concerns by initiating major changes in the institutional forms. Some critics (e.g.[7]) have pointed out that the Government's "real" motive was to reduce health spending either by reducing cost or by shifting some of the burden to users. The apparent contradiction in reducing the cost of health-care delivery while providing sufficient services was to be resolved by more efficient use of resources. It was proposed by the Government's policy document[6] that resources could be better used through a system of managed competition. These reforms involved the abolition of 14 area health boards (AHBs), the creation of four regional health authorities (RHAs) the creation of 23 Crown health enterprises (CHEs). The new health-care system in New Zealand is shown in Figure 1.

Under the old system, the health budget of the Government was allocated to fourteen AHBs on the basis of population with some adjustments for demographic factors. The AHBs used to own facilities and hospitals to provide services to their locality. The Ministry of Health used to manage other health-related services through separate contracts with other voluntary organizations such as the Plunket Society (pre-school nursing service). The new systems introduced organizational arrangements by replacing AHBs with RHAs. The RHAs are responsible for establishing health needs and purchasing services for their communities from the providers of health care. This separation of purchaser-provider is supposed to bring efficiency and greater flexibility. The system also separates social and business roles of different institutions. All the facilities of AHBs were transformed into CHEs. The CHEs will now own hospitals and compete for contracts from the RHA. The changed environment is shown in Table I.

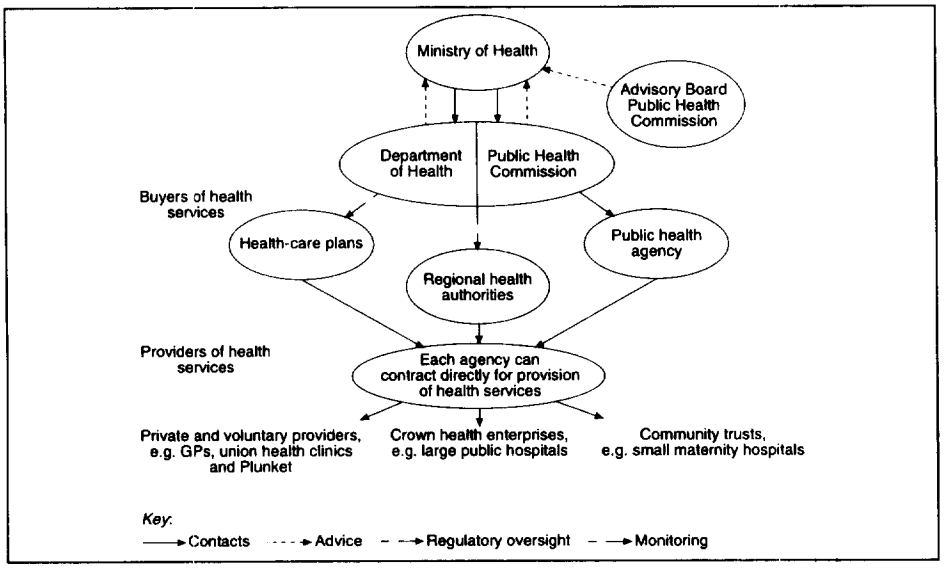

Figure 1.
The New Health System (adapted from[6])

Old system	New system
Politicized bureaucracy	Efficient business
Production-driven organization	Customer-driven organization
Primary and secondary services were separate	Primary and secondary services are integrated
Monopolistic situation	Competitive environment
Static system	Dynamic system

Table I.
The Changed Environment of Area Health Boards

CHEs are now required to operate as commercial organizations and compete for services that the RHAs demand. Instead of fragmented funding through AHBs and the Ministry of Health, the new system now channels all funding through the RHAs. With this background we shall now evaluate the role of accounting information under the old and new systems. Such discussion should throw some light on how accounting is being used to facilitate changes in the health sector.

Data Sources

The health sector in New Zealand entered a new regime on 1 July 1993 with the creation of a pseudo-market and contestability of health-care services. The institutional arrangements for such changes are now being made. From a research point of view such a period of change provides an excellent opportunity for studying the creation of new accounting and budgeting systems in health care organizations. Although most of the changes were influenced by external sources, the direction of change was shaped by the forces specific to the individual

organization. Our focus was to understand how various changes in the provision of health care in New Zealand were facilitated by accounting and budgeting systems. Although it is important to understand the broad social and political movements within the context of change, this article focuses on the change process in one organization and its approaches in dealing with such issues as establishing new accounting and budget systems.

In terms of access and convenience Health Waikato, a newly created CHE was ideal, representing all attributes of institutional change. Specifically, we conducted long interviews both with managerial staff responsible for designing accounting and budget systems and with the clinical staff of Health Waikato. A team of three researchers conducted the interviews, which were organized in such a way as to allow two researchers to engage in the discussion and the third researcher to observe the process and to ensure that all vital points were covered. Different views on the same issue were encouraged by asking the same question of different organizational participants.

Cost and Budgeting under the Traditional Approach

Prior to the reform, the budgetary process was dominated by funding restrictions and their consequent effect on organization and reorganization of services. Working under financial restrictions, each board met to discuss various options and their consequences for the existing services. Boards gave indications about the likely level of restrictions and encouraged planning on the basis of such indications. Each board carefully studied national political priorities to formulate its area priorities for the coming year. By September each year the exact allocation of funds to different AHBs was known. Typically 20 per cent of the total allocation was kept for new initiatives and service developments and the remaining 80 per cent allocated to 11 specialties in different hospitals (dental, paediatric, geriatric, psychiatric, intellectually handicapped, obstetric and neonatal, surgical, medical, A&E/primary health care, health protection, and health promotion). While allocating funds to different hospitals, AHBs considered projected patient statistics in terms of available beds, daily average capacity, day-patient projections, and out-patient projections, for each of the 11 service categories. Individual hospitals disaggregated the total funds received into different service categories and supporting functional activities.

Historically, financial accounting and reporting were designed around functional budgeting systems. Each functional department had an annual budget which was fixed, and regular feedback reports would show under- or over-expenditure against the budgeted allocation. This approach used budget centres which were easily identifiable units within the hospital and which tended to be those ordering supplies, such as x-rays, pharmacy, operating theatres. The financial reporting function concentrated on overall monitoring of expenditure against a cash limit.

Traditionally, hospitals and other health-care providers operated in the name of social justice i.e. provision of health care as a right of citizens. According to Hopwood[2, p. 139], the traditional modes of operation resulted in the delegation

of powers to the medical profession whose members claimed the right to make decisions on the basis of their own professional training and codes of conduct rather than in terms of any administrative plan or economic logic. They claimed the right to do this without financial accountability since the saving of lives was deemed to take precedence over dollars. As such there were cases where clinicians found it clinically desirable to prescribe treatment which could over-run the financial budget of the hospital. The cost and budgeting approaches were based on aggregate figures in clinical and general categories. Under the clinical category, patient-related information was provided (such as, in-patient, out-patient, information on patient treatments). General services were seen as those which supported the role of the clinical operation (such as, laundries, technical services, transport services, boiler room, general administration). From an accounting perspective, general services were categorized as fixed expenses while the clinical service costs were variable expenses. The functional categories of cost and budget systems are shown in Table II.

This system focused more attention on the control of input and encouraged clinicians to concentrate on treating patients and to leave the support services to handle the management of facilities. Little effort was put into providing functional managers with relevant cost information relating the actual work performed (measures of output) to the dollars spent (measures of input). It was difficult if not impossible for departmental managers to control expenditure. If a pharmacy department overspent, to give one example, the reason might be doctors prescribing expensive drugs, wastage at the ward level, or just an increase in the number of patients being treated – none of which could be considered controllable by the manager of the pharmacy. There appeared to be a lack of both collective and individual accountability for the cost and quality of care.

The changes in the health sector have enormous implications for the budgetary processes. The first-stage allocation of the national health budget to different newly created RHAs is still going to be the same, i.e., on the basis of population. However, the second stage of resource allocation will be based on a (pseudo) market mechanism. As the hospitals will be funded on the basis of service provided rather than lump-sum allocations, budgeting is going to be a major vehicle for considering alternative ways of organizing services and exploring different kinds of relationship.

Clinical categories	General categories
All clinical staff salaries	All general staff salaries
Operating theatre	Information systems
Pathology	Laundry
Radiology	Catering
Etc.	Etc.

Table II.
Functional Categories of Cost and Budget Systems

Cost and Budgeting under the New Regime

The policy document[6] argued that new arrangements would provide economic incentives both to providers and purchasers. Purchasers (RHAs) are responsible for deciding the health status of the community and how to provide the best available heath care for its members. The providers, on the other hand, can concentrate more on the efficiency of service delivery. There was an official time schedule to start the process from 1 July 1993. The haste with which the reforms were being carried out caused concern. The potential for any efficiency was dependent on other arrangements and preparations such as how the contracts would be monitored and supported and whether there were competent managerial skills available to carry out such requirements. The increasing emphasis on market forces could not work without better sources of financial and cost information. Consequently, there arose a need for a substantial amount of information on products, their costs and prices. An important component of new information needed to be related to the quality of service provision since it was inherent in the idea of competition that providers would face an incentive to provide good quality services and respond to patient needs. There are, however, serious problems in the proper definition of products, their qualities, and their prices. The purchaser can enter two types of contract with the provider, i.e., contract accounting on diagnostic related group (DRG) profiles and block contracts. Without appropriate cost information and specified quality standards there is a danger that the purchaser will look for cheaper options and this could have undesirable effects on the provision of services as a whole. The newly created RHAs are faced with uncertainties concerning purchasing quality services at reasonable prices. The main problems centre on cost comparison among various heath-care providers.

Costs of various providers cannot be compared directly because of the difficulties of asset valuations, and specialty of services. As such, the RHAs would be trying to build up a long-term relationship with potential providers of services to ensure continuity of services on a long-term basis. They would also be concerned with the quality of delivery of health care. The RHA would accept some differential pricing between providers. To help such processes RHAs are focusing on the costing methodology of various providers. The service contracting manager of Waikato Hospital commented: "The RHA is trying to develop a costing method for all the services we are currently providing. They have the right to review our costing methodology. If our overhead structure is out of line compared with our competitors then our price will be too high and we will be in danger of losing business".

The new health regime has made a profound impact on the way in which the hospitals are managed and operated. As funds are now being allocated on the basis of individual services, they have great influence on the revenue earned by the hospital. The change process does not stop at the interface between provider and purchaser. The public hospitals are now in a situation where they have to compete with other providers of health care. This has facilitated a new type of discourse and culture at the hospitals. Hospital management is forced to interact

with its contextual environment to assess its position in the competitive market. To improve performance, the hospital needs to be able to find out quickly the cost of any particular treatment and how that cost is structured. There is also a need for marketing intelligence to judge the viability of products in terms of financial revenue generation. All these changes of focus demand a shift from the traditional culture.

Under the previous system, most of the public hospitals were run by health professionals. There was less concern about the costs of service provision. With an incremental budget-funded formula there was little incentive to control costs, because reduction of costs would have reduced their income since budget allocation was based on past costs. Decisions about resource allocation were made by the doctors and health professionals. With the new conception of hospitals as business organizations, there is a need for a new type of manager and a change in behaviour. A new type of managerial role is necessary because the adoption of a market philosophy would make little sense unless there was a change towards managing resources more commercially. Under this circumstance, the present structure of hospital administration appears to be insufficient and also an ideological misfit unable to appreciate market philosophy. The newly appointed senior managers at the Waikato Hospitals who are from business backgrounds, welcome the introduction of market mechanisms and have the expectation that the general focus is going to shift towards efficient management of services. It is expected that the general principle of purchaser-provider split will cascade down the organization. Strategic issues rather than rules and precedents will become important for the management of hospitals.

New Accounting and Costing Approaches

Under the old regime, accounting was a neglected area at the hospital. Health professionals would always prefer to take one extra nurse or clinician rather than of an accountant. The whole administration was run to serve clinicians in their treatment of patients, the result being that accounting was virtually non-existent. With the health reforms, there has been a substantial change of attitude towards the role of information in general and accounting in particular. A business or economic mindset in health-care delivery has paved the way to running hospitals commercially. Accounting has now come to be seen as a neutral technique to pursue economic efficiency with rational calculation of costs of providing services. The pursuit of economic efficiency has created an atmosphere where accounting can develop and prosper.

The new managers soon began to introduce changes in the hospital in order to enhance efficiency of resource utilization. The notions of efficiency and effectiveness are very subjective and depend on the interpretations of such concepts[8]. Such terms should be focused from a specific context in which a theory operates. However, in general terms efficiency is measured by the relationship between inputs and outputs. In a hospital setting efficiency can be achieved only through a joint effort by clinicians and managers. Attaining effectiveness, however, is a clinical responsibility and is defined as the treatment of patients in curing

diseases. Traditionally, a hospital was a professional bureaucracy where professionals were responsible for the "operating core". Management activity and financial responsibilities were considered secondary. Thus there was a perceived need for introducing some changes in the areas of resource allocation and consumption.

In our focal hospital, the non-clinical support services cost nearly $33 million a year. With the new concept of a competitive environment, there was a need to ascertain costs on a patient-care basis. All overheads needed to be allocated defensibly. Enough resources were allocated to introduce a proper cost accounting system as a basis both for introducing internal control systems and for contracting purposes. So the idea was to concentrate on non-clinical and clinical support and drive those costs to patient care units so that these costs could be allocated to contracts. The management accounting project (MAP) leader commented:

> The management accounting projects have started to find out more accurately the costs, what resources are being used in various activities, as a basis of contracting. There has been no reliable financial information of any sort in the hospital, so the decision process was based on politics. Now we are heading towards a more businesslike approach, we have introduced a new financial system and are hoping to spend a large sum of money on general information systems and medical records to control patients. So information is going to be a prime aspect.

The MAP was intended to identify cost drivers of activity, work out proper charge-out rates, make sure that all 1992/93 costs were charged out, and hand over the exercise to divisional accountants. The role of cost determination was not confined solely to contracting. It was utilized more usefully to introduce internal accountability at the hospital. The funder-provider roles actually cascade down through the organization in the sense that when the hospital is given a contract to provide some services it will generate internal competition among its internal departments or units to compete for that service. To facilitate the changes, accounting and information systems were needed which allowed management to decentralize the process but still maintain control over activities. The management decided to decentralize the total organization into separate individual units where each unit would run as a separate business entity. By this means it was thought that hospital efficiency could be achieved. Individual hospital units would take their own responsibility and clinicians would be more cost-consciousness. The way in which cost-consciousness is to be achieved is through accounting tools such as more accurate service costing, and resource allocation. The general manager finance commented: "The function has been decentralized by the recruitment and placement of divisional accountants. The people recruited as divisional accountants had to be professionally qualified, and have at least three years' experience in a large commercial organization".

Such professional accountants are placed at the division level to work with the clinicians so that they can realize the need of and use for cost information in resource allocation and costing purposes. Such restructuring of the organization is facilitated with the help of cost accounting projects where management can establish a system which allows them to maintain visible control without directly interfering. The divisional managers are beginning to use their accountants and demand information for their managerial duties. They need information to manage

resources and realize that survival may depend on understanding the numbers. The divisions are now being asked to prepare business plans focusing on strategic direction. Preparation of such plans requires information on product costs, profitability, cash flows, etc. Business plans are supposed to provide a more focused direction for each division.

At Waikato Hospital, various management accounting projects were undertaken to help management to allocate all costs to responsibility centres. Hospital doctors are recognized as major consumers of resources. Clinicians were asked to manage their units. The central administration has now allocated all central overhead costs to various divisions and such divisions are given freedom to decide the level of consumption of such central services. Such an accountability regime is gaining ground and people are realizing that they have to live within the system. Such transformation is happening even though very few people really understand these allocation processes. A hospital is now seen as a collection of cost centres producing health products. The commercial model requires a return on resources utilized which was virtually unknown to clinicians. The competition in the health sector was based on output, i.e. products. Contracting for specific procedures is to be carried out in terms of contestable DRGs. So if the contracting is based on activities, there is need to define those activities which actually drive the organization. It moves control from functional line managers to process managers.

The need for managing the products and establishing accountability in terms of output was seen as crucial. Management at the hospital will have to account for the types of service necessary to treat each patient. In other words, more information will be required about particular clinical procedures that are inputs into an entire patient treatment for clinical decisions and other purposes. The implementation of these new conceptions requires new management and accounting procedures throughout clinical areas. The Waikato Hospital introduced a case-mix system known as the resource utilization system (RUS). The RUS was created with the economic justification of reducing wastage and improving efficiency. The inherent objective was to enhance better control over clinical practices through categorization of treatments. The general manager finance commented: "The clinicians are responsible for prescribing treatments. It means that they drive the organization in terms of costs. Last year one clinician spent $500,000 on eight patients. Under the present system it is not possible to control and question their operations in an objective way to see the components of such costs".

The RUS was designed to focus on the already-created conception of cost centres by treating the hospital as a production process. The cost centres would be responsible for converting resources into units of products such as x-rays, drugs, laboratory tests, operating room time. These intermediate products would be combined to produce the end product, i.e. the treated patient.

The treated patient would be identified with the case manager. The system was able to give feedback to clinicians on their personal level of performance. Conceptualization of health care as product[9] reinforces the tendency to view hospitals as manufacturers such as General Motors. One manager commented: "Like factories, we move patients backwards and forwards continuously into the

central department and it is like a work-place in a factory, like work in process and finished goods, you just have to call in different names".

Resources were allocated to develop the RUS and every effort was made to focus on the positive side of the system. The rhetoric of economic calculations and data manipulation was sustained by appeals to objectivity. This process was socially constructed to allocate and control resources in the organization. Clinicians have started to believe that there are reasons and explanations behind the numbers. In fact, the RUS is a creation of political rationality which will enable management to show the effect of downsizing, of rationalization the offering some services and of putting a number on the value of patient treatment. This economic frame of analysis can also rationalize the closure of uneconomic services, or the selling of unprofitable assets. With commodification and better costing methodologies for hospital services, the hospital managers now have a better understanding of the cost behaviour of services. It is possible to allocate resources according to the activity patterns of the different outputs of the hospital.

Conclusion and Discussion

Although the health-sector reforms encouraged alternative systems to develop and prosper, it is the accounting criteria that have come to dominate the scene. As a result, there are inherent conflicts and tensions in the organization as to which system will predominate. Not all aspects of organizational life can be measured in financial terms and decisions based on financial criteria alone can lead to serious consequences. Financial systems serve well in allocating overheads to determine the full cost of providing services but they can also be a costly exercise. The financial system also tends to approach organizational problems in a narrow way, emphasizing cost-consciousness. The financial system also fails to address organizational interdependency. For example, recharging of overhead can lead to a decision to discontinue some activities at the organization. Such decisions may have serious problems for the overall performance of the organization and the overall recovery of overheads.

Accounting systems are not neutral, they are created by people and can serve different purposes in the organization. With their rational image they project an economy aspect of health care which is much more visible. However, the accounting language products, cost drivers and profit centres, is bound to be in conflict with the vision of the established clinical profession. But the commercial rhetoric is so powerful and convincing that few people really try to understand the basic accounting calculations. In order to institute a control system at Waikato Hospital, clinical staff are asked to take not only clinical but also financial responsibility. This is particularly important as clinicians drive most of the hospital costs in treating patients. However it can be argued that all such control systems were not waiting to be discovered by human beings, rather they were created to serve certain purposes and to change behaviour at hospital which was predominantly clinically oriented. Not all clinicians are ready to accept such commercial arguments and are motivated to protect their domains.

But the believers in reform are pushing towards a more business-oriented approach because the overall political climate favours them. The changes are intended to bring a new form of behaviour which has to address the commercial realities of health-sector reform. The adoption of accounting logic is useful in changing the work arrangements of the hospital. The new managers realize that their whole reform could be at risk if clinicians are not co-operative. Therefore, they are trying to take clinicians on board by instituting proper control systems. However, the change process in any organization is problematic, especially where different values are affected.

References

1. Fougere, G., "The State of Health Care Reform", *New Zealand Health and Hospital*, July-August, 1992.
2. Hopwood, A.G., "Accounting Calculation and the Shifting Sphere of the Economic", *European Accounting Review*, Vol. 1, 1992, pp. 125-43.
3. *Unshackling the Hospitals*, Report of the Hospital and Related Service Taskforce (The Gibbs Report), Government Printer, Wellington, New Zealand, 1988.
4. Arthur Andersen and Company, *Public Hospital Performance Assessment*, 1987. Report commissioned by the Hospital and Related Services Taskforce, September.
5. Audit Office Report, *Management of Public Hospital Surgical Workloads*, Wellington, New Zealand, 1989.
6. Department of Health, *Your Health and the Public Health*, (The Green and White Paper), A Statement of Government Health Policy, Wellington, New Zealand, 1991.
7. Ashton, T., *Reform of the Health Service: Weighing up the Costs and Benefits*, Auckland University Press, New Zealand, 1992.
8. Hopwood, A.G., "Criteria of Corporate Effectiveness", in Bronx, M. and Bennet, R. (Eds), *Managerial Effectiveness*, Thomas Valley Regional Management Centre, New Zealand, 1979.
9. Chua, W.F., *The Social Manufacture of Hospital Costs*, Paper presented to the Third Interdisciplinary Perspectives on Accounting Conference, Manchester, UK, 1993.

Further Reading

Ball, I., "The New Approach: Financial Management Reform", *Accountants' Journal*, Vol. 71 No. 5, June 1992, pp. 17-21.

Health Planning Special Interest Group, *Strategic Management and Planning: Creating the Effective Health Organisation*, Oranga, April, 1988.

Lawrence, S., Alam, M. and Lowe, T., "The Great Experiment: Financial Management Reform in the New Zealand Health Sector", *Accounting, Auditing and Accountability Journal*, Vol. 7 No. 3, 1994, pp. 68-95.

Laurence, S. and Alam, M., "Health Care Contracts – In Search of a Costing Methodology", *Accounts Journal*, Vol. 73 No. 3, 1994.

Martin, J. and Harper, J., *Devolution and Accountability*, New Zealand Institute of Public Administration, Wellington, New Zealand, 1988.

Strategic Management and Planning: Creating the Effective Health Organisation, Health Planning Special Interest Group, Oranga, New Zealand, April 1988.