ORGANISATIONAL EFFECTIVENESS: DEBATES BEHIND MEASUREMENT ISSUES IN THE PUBLIC HEALTH SECTOR

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Abstract

This paper presents a discussion and exploration of influences into the development of performance measurements in the public sector. Such measures are subject to individual (rational decision-makers), managerial (goal congruent) and organisational (political philosophy) variations A case study (PHARMAC) is used by way of example to describe one organisation's response to the complex relationships that exist within the public health sector. However, this paper does not attempt to describe or prescribe how public sector entities should behave. Rather, it is hoped to enable those responsible for developing public sector performance measures through an informed presentation of the influences on such actions.

Key Words:
public sector / performance measures / concepts / PHARMAC / decision-making

Introduction – the Public Sector

A critical analysis of any organisation asks the question: what is the purpose of this organisation? Why does it exist? This is quickly followed by the question: how do we know if it is doing what it is supposed to do? Public sector entities, where government-funded agencies provide services to third party recipients,[1] pay particular attention to effectiveness and accountability measures. Public sector entities typically cannot rely on financial results to provide a comprehensive measure of success; they are not accountable to financial shareholders. Despite this, financial indicators are included in a variety of effectiveness indicators used, though supplemented by other quantitative indicators, and sometimes with the addition of qualitative narratives. These range from high-level effectiveness indicators that relate to social goals, to lower-level efficiency and process goals (Anthony & Young, 1994).

The task of aligning organisational purpose with assessment tools in the public sector is especially difficult (Van Peursem *et al.*, 1995). The public sector in many countries, including New Zealand, has been characterised by changes away from traditional public administration and towards market-place management (Lofgren & de Boer, 2003; Hughes, 1994). Personal

[1] Precise definition of "public sector" versus "private sector" is difficult (Boston *et al.*, 1996), but is taken in this context to mean government-funded organisations primarily concerned with provision of services to those deemed to be in need, with an inherent focus on social outcome.

responsibility and accountability of managers, coupled with more clearly specified organisational and personal objectives, have led to systematic evaluation of programmes in the name of "... the three E's: economy, efficiency, effectiveness" (Hughes, 1994, p. 58). Market mechanisms such as the contracting out of services or functions are almost commonplace, as is a universal concern over achievement of specified results (Scott, 2001; Boston *et al*, 1996; Hughes, 1994); these may (or may not) correspond to the societal objectives for which the organisation is responsible. And the provision of public sector services to third parties, especially in the health sector, means ethical considerations should be at least acknowledged in systems of performance assessment (Burton *et al*., 2001)[2].

This paper attempts to contribute to the literature that informs reliable, acceptable and appropriate measures for the assessment of public sector organisational performance (Scott, 2001; Van Peursem *et al*, 1995). It does not attempt to prescribe or illustrate specific effectiveness measures. Its purpose is to help us to understand the influences and means by which we arrive at a set of measures. Through an increased awareness and appreciation of these influences and means, practice will be improved.

The concern is not to debate the success or otherwise of reforms to the public health sector. Rather, the context of reform and the inherent difficulties of assessment within the public sector are used by way of background for exploring the general topic of organisational effectiveness. In particular, the focus is on understanding the decision-making debate, in clarifying how we go about choosing effectiveness measures (not the measures themselves).

A Note Regarding the Context of Public Sector Entities

Typically, reported measures concern inputs consumed. Recent public policy changes supplement these with output measures (Scott, 2001; Boston *et al*, 1996), the connection to outcomes not always being obvious and clear-cut (Anthony & Young, 1994). In New Zealand, at least, the reporting requirements of the Public Finance Act 1989 means a consistency of approach with respect to financial measures. However, the extension of the reporting process into less measurable performance indicators runs "...the risk that the more readily measurable aspects are over-emphasised in comparison" (Boston *et al*, 1996, p. 277). It is timely to be reminded of Hofstede's (1981) concerns over vaguely specified models that correspond to reality and precisely defined models that reflect limited perception.

Stemming from a prolonged period of rapid structural changes to the health sector, many authors have described the impact on public health entities that resulted from wide-reaching reforms throughout public sector of New Zealand (for example: Lawrence *et al*., 1994; Lawrence *et al*., 1997; Ashton *et al*., 1991). The reform process itself has also been well documented by others (for example: Scott, 2001; Boston *et al*, 1996). The success (or desirability) of these reforms is a matter for considerable debate, and cost and available technology will frequently clash with perceived health needs and the ability (as opposed to capacity) to provide treatment. Establishing a comprehensive set of relevant and reliable performance measures in this context is, to put it mildly, problematic.

[2] For the purposes of this paper, it is assumed that private for-profit organizations do not need to be so concerned, a debatable point in itself.

Inherent to the debate over best-practice effectiveness measures are two issues that need to be acknowledged: the level of outcome with which the entity is concerned, plus the object of the effectiveness assessment. Determination of these two issues plays a crucial role in the choice of appropriate assessment criteria, though often confused. Public sector entities are funded, by government or donation, to provide services to communities or to groups within a community. Though the primary objective is to provide service(s) to individuals, the level of "success" is determined according to organisational effectiveness with respect to community (aggregate) impacts. The organisation has interface with individuals, but accountability is normally referenced to the broader, societal-level, objectives. For example, New Zealand's public hospitals "...are set up to provide quality acute care and to ensure that as many people as possible have access to elective (non-acute) services"[3] at an aggregate level. While a hospital does provide individuals with appropriate health care, as an organisation it takes a broader approach, being charged with providing services to a community, to ensuring it can fill the needs of a population. Measures of achievement, therefore, will not typically describe the care received by individual patients except through summary information.[4]

Further, organisations are held accountable to the public for their actions. For example, the Pharmaceutical Management Agency of New Zealand (PHARMAC)[5] is challenged over decisions relating to funding of particular medications. The decisions made by PHARMAC are judged against the criteria for which it was established, namely, to provide certain services for the population of New Zealand. These decisions are not made by the entity itself, but rather by individuals within the organisation who decide how best to fulfil the objectives (Norris & O'Dwyer, 2004). There needs to be a clear distinction between performance assessment of "the organisation" (with respect to purpose and objectives of the entity) and of the individuals functioning within the organisation (with respect to job descriptions and individual responsibilities relating to specific jobs).

Placing this context into the literature, these general thoughts need to be developed into something more specific and useful. While not adopting a fully middle range approach that includes key continua with respect to theoretical, methodological and change domains (Laughlin, 1995), the paper draws upon calls for grounded empirical research. It connects an empirical investigation into a unique and significant organisation in the New Zealand public health sector with a number of theoretical considerations. The relatively small size of the New Zealand context may impede the reconciliation of empirical evidence with main-stream theorisation and, while the observer attempts to remain unobtrusive, some interpretation is inevitable. The advantage of a middle-range style is the recognition of social context as a shaping force.

The paper is structured as follows. A philosophical note is introduced with a brief comment on meaning and language as related to the decision-making process. Against this background, the

[3] Information about New Zealand's public hospitals is available on the Ministry of Health website.

[4] Occasionally where systems fail to avoid unfavourable outcomes for individuals, the media tend to concentrate on debates such as "what should the hospital have done to avoid this situation with this individual." In this context, an examination of organisational processes is warranted as a check on effectiveness. However, the most appropriate response to circumstances outside the organisation's control (e.g. complicating medical conditions) is beyond the scope of this paper.

[5] PHARMAC as an organisation is described in a later section of this paper.

discussion continues into the influences that affect decision-making in the public sector. The notions of consciously bounded rationality, goal congruence and political philosophy are described within the context of public sector accountability. Next, by way of illustration, a case study is used to highlight the inevitable tensions in this process and presents one organisation's "solution." A general discussion and concluding comments will summarise the principle reflections. The intention is this: through an exploration of the overall context of the public sector, coupled with a consideration of influences on the development of effectiveness measures, the parties to this process will be better enabled in their design of measurement and reporting systems.

The Context of Accountability and Effectiveness in the Public Sector

Relevant to the whole debate, though in an indirect manner, is the issue of who really has the right to judge organisational effectiveness. In the private sector, shareholders have ownership rights[6], and many would claim that governmental enforcement agencies, professional and trade monitoring bodies and environmental "watchdog" groups also have a legitimate claim to this authority. In the public sector, relationships are more complex. Often public entities receive some, or are totally dependent upon, government tax-sourced funding. Yet not only is it impossible to track taxpayer contributions to identify whether the public agency benefits are received by those who paid, often the benefits are received by a segment of the community that has not contributed in any significant way to the funding source. These relationships can be portrayed in the following figure, which may serve to illuminate the discussion which follows.[7] All of the groups have interests in public entities, from different perspectives, and have different degrees of "rights" to effectiveness information. This further complicates the development of comprehensive, sensible, understandable performance assessment measures

take in figure 1 about here

Considering this aspect of public sector entities, a framework is presented to assist in the task of devising organisational effectiveness measures. Three areas for theoretical consideration are considered, with reference to the accountability relationships which underlie public sector entities. This theoretical discussion will, hopefully, assist in the development of better organisational effectiveness measures.

Decision-Making – What Goes on Behind the Scenes?

Meanings

Of particular interest to this paper, first, is the idea of cognition. Through appreciating and understanding the meaning of specific words, subtle but significant influences on decision-making are seen. If serious debate is relevant to single words (and objects), then extrapolating

[6] The relationship between shareholder ownership and property rights is frequently promoted, though it is not necessarily as straightforward as many would claim (Monks & Minow, 1995).

[7] The term "recipient" is used to avoid the derogatory connotations often associated with the word "beneficiary," to denote those who receive benefits from a public sector agency.

the concepts underscores the need for care when specifying effectiveness and performance measures.[8]

Moving beyond the realm of concrete objects and into descriptive words as used in performance measures *assumes* a high degree of common perception between participants. Writing in *Philosophy*, Wright (2005) describes this through the notion of Triangulation, whereby two humans and an object for discussion can be visualised as standing at the three corners of a triangle. The article discusses sensory and perceptual awareness of objects, the intention for discourse being for one of the individuals to induce a change in the other with respect to the object in question. The object in the triangle is described as being definite and real; Wright questions and debates the nature of what is real, and whether or not two individuals can reasonably assume that the object in the third point of the triangle is, in fact, the same for both of them. Kant is referenced (Wright, 2005, p. 55) regarding idea that words have different meanings for different people. The debate continues over the risk in focussing on the object per se, as compared to the use of an object. To act "as if" an object exists may be of more value than to be concerned over the nature of its reality.

Having signalled the need for care with the use of words when describing effectiveness at any level, this paper moves to consider three inter-related theoretical issues that provide a framework for assessing philosophical and institutional activities. This is done with due consideration to the concerns mentioned previously: the level of outcome that an organisation is charged to deliver plus the object being assessed by effectiveness measures.

This multi-level approach to the debate over effectiveness and performance measures is also seen in Willcocks (2002), where "effectiveness" in the public sector is explored at the individual, managerial, organisational and inter-organisational levels. Each of these levels of effectiveness is described by Willcocks with respect to cognitive perspectives, role theory, cultural and political theory and systems/network approaches respectively. Individual effectiveness is dependent upon one's ability to learn and assimilate knowledge. Managerial effectiveness is a consequence of clearly communicated expectations, and conformity by individuals to those expectations.[9] Organisational effectiveness is affected by the presence (or absence) of uncertainty and relative power balances, as well as well as other unstructured cultural and political influences. Willcocks (2002) describes a further level of effectiveness at the inter-organisational level, involving the notion of synergy and the benefits of co-operation. The first three levels will be referenced and discussed further in this paper.[10]

Consciously Bounded Rationality

Individuals, and individuals acting within groups, are the instruments by which organisational policy is enacted. Their decisions determine the means by which an organisation is seen to operate (Norris & O'Dwyer, 2004), and by which the success of an entity is judged. Further,

[8] This is a different problem from the risk of using inappropriate measures. Debate and confusion over words, phrases and meaning extends into the application of words describing performance measures in different situations.
[9] And the ability to use reconciliation, compromise and negotiation arguably define effectiveness when expectations are in conflict.
[10] Willcocks' fourth level of inter-organisational effectiveness lies outside the scope of this paper.

when assessing an institution according to the need or goal it is supposed to fulfil, we ask: are there alternative institutional arrangements that would satisfy the same needs? Functions will alter if there is a change in balance between consequences: situations will be avoided if they are costly, and favoured if they further desirable outcomes. This theory of rational behaviour also concerns the characteristics of the "rational actors" (Simon, 1978, p. 10) in an organisation, with how they deal with uncertainty and complexity. Substantive rationality, the extent to which appropriate courses of action are chosen, is as important as procedural rationality, or institutional effectiveness, given human cognitive powers and limitations (Simon, 1978).

Willcocks (2002) says that "...managers need to be effective learners" (p. 266). Effective learning is a complex idea, but must at least involve understanding language and meaning, as well as focussing investigations into language and meaning so as to organise information. Differences in individual cognitive styles will affect managerial effectiveness (Willcocks, 2002), as will cognitive distinctions presented above. In other words, both processes and results are fluid, and are dependent at least in part upon the rational decision-making processes of the organisational actors, and on how they react to the surrounding organisational environment.

In the public sector, economic decision-makings can be defined as a concern with the "… *rational* allocation of scarce resources" (Simon, 1978, p. 2), and institutions that need to make economic resource decisions rely on the concept of rationality (Hughes, 1994; Stiglitz, 2000). In making decisions, it is a costly exercise to search for alternatives when the "rational actor" has incomplete information. The question then often revolves around when to terminate the search, not how to carry it out. Searches are important but, accepting that information-gathering is not free, unlimited information is not possible. Thus a conscious decision must be made concerning the most efficient use of available resources when solving complex problems. "We cannot afford to attend to information simply because it is there" (Simon, 1978, p. 13).[11]

We now have the idea of bounded (limited) rationality (Scott, 2001). Decisions made are the best possible at the time, given the available information at that time. Better options may well be passed over because of incomplete information. And so, given the idea that limitless searches for information are simply not possible, the idea of bounded rationality can be expanded into one of *consciously* bounded rationality. That is, an organisation explicitly recognizes the limits of its search powers and develops criteria for terminating the search. If financial resources (inputs) are viewed as controlling the search (for instance, for better health provision) then this rationing approach already occurs more often than many would want to accept. Within publicly-funded health systems, "elective" surgical procedures which will improve quality of life but are not life-saving may be limited to those in greatest discomfort or with the best chances of success. Or, as in New Zealand, pharmaceuticals may be provided according to a national selectively-funded formulary.

Referring to Figure 1, providers face a conflict between limited economic resources from funders and ever-increasing demands from recipients. Given recent technological advances in both diagnosis and treatment of health-related conditions, resources will likely never match demand. There will always be financial constraints placed upon decision-makers.

[11] A further complicating factor is that influences the stability of environment is that community health needs are subject to change, and sometimes with very little notice.

Consciously limiting a search (e.g. for the best use of scarce economic resources) involves subjective judgments on the part of decision-maker(s). There is a considerable element of trust that the individuals so concerned will stop the search at the best possible point, given the context. This trust is considerably validated when individuals' motivation and values are in alignment with the goals and objectives of the organisation as a whole.

Goal Congruence Between Individuals and Public Sector Entities

Individuals are judged against individual performance measures, and if an organisation is to be effective, these must reach beyond managerial performance and be designed to encourage the achievement of organisational objectives. In their classic work, Locke & Latham (1990) describe the concept of goal commitment, or the "… attachment to or determination to reach a goal, whether self-set, participatively set, or assigned" (p. 125). And if employees and volunteer workers share commitments to achieving the same things, there is a motivational effect on performance: performance is a function of knowledge and ability plus motivational factors (Locke & Latham, 1990; Geare *et al*., 1987). Thus, if organisational and individual goals are congruent, then there is a collective motivation to achieve those goals (Anthony & Young, 1994).

The contrary also holds; problems arise when the goal content (the measured behaviour) is significantly different from an individual's committed goals. Ouchi (1979) discusses the importance of recognising the need to either match individual with organisational goals or, in cases of incongruence, to be able to measure performance precisely. If incongruence involves more than mere disagreement, and reaches an active state, the converse should also hold. Congruence involves the motivational effect towards pursuing common goals, leading to practical as well as theoretical implications of goal setting theory: "… goal setting theory does assume that the goals people have on a task influence what they will do and how well they will perform" (Locke & Latham, 1990, p. 6).

Historically, public health services have been characterised by goals consistent with professional health training and individual committed goals (Bourn & Ezzamel, 1986). Administrative organisational goals, as seen in recent years, used not to receive the same degree of emphasis. Conflict and tension between managerial (administrative) and professional goal orientations has been explored previously (for example: Abernethy & Stoelwinder, 1995; Bourn & Ezzamel, 1986; Lowry, 1990; Llewellyn *et al.*, 1999). In the health sector, there is a very real risk of conflict over resource allocation between finance-driven politics and professional ethics (recognised as early as Abernethy & Stoelwinder, 1990; Roberts, 1992; Coupe, 1991; Coombs, 1987). Reforms emphasising market-place models, whereby control can be exerted through the control of resources (Ouchi, 1979), or financially-constrained goal content, is at odds with control through the ethics of professional health workers, in which the individual patient's needs are paramount. In a context where needs-driven activities override economic considerations, there is resistance to market-based terminology, the fear being that market-based philosophies will result (Chua, 1995).

Willcocks (2002) explores role theory and the influence of role expectations in managerial effectiveness. The ability of a manager in the public sector to "...diagnose the situation or demonstrate perceptual sensitivity..." (p. 268) affects his/her effectiveness, along with the degree of

conformity of behaviour to expectations. It requires little effort to see that such expectations need to be in alignment with organisational aims and goals.

Referring to Figure 1, individuals within the public sector providers face potentially conflicting goal alignment. There is, by virtue of the nature of the organisation, a belief in the value of providing services, in the social outcomes aspect of the organisation. Also, however, will be the need to constrain spending to the limit of available resources. The specifics of an entity will dictate the extent to which this potential conflict is realised. To some extent, also, the stated entity focus will have an impact (i.e. societal or individual).

Public Sector Political Philosophy

As well as consideration of individual and managerial effectiveness in the public sector, Willcocks (2002) extends his discussion to include organisational effectiveness. The importance of culture and politics in determining the organisational culture within which managers are evaluated is central. Managers cannot necessarily affect and alter the wider political and cultural context; they operate within, and are judged against, a particular environment. The importance of a "...consensus, or shared meaning" (Willcocks, 2002, p. 271) is recognised.

One such political philosophy is commonly credited to the work of John Stuart Mill (1808-1873). Following Jeremy Bentham's teachings he wrote, in part, about the possibility of an objective principle for establishing when an action is right or wrong. In defining the principle of utility, Mill's basic principle can be summed up as "…an action is right in so far as it tends to produce the greatest happiness for the greatest number" (Popkin & Stroll, 1993, p. 38). In other words, if the overall beneficial effects outweigh the overall harmful effects of an action, then it can be considered as "right." Because the focus is on the majority of individuals affected by an action, it is often claimed that utilitarianism is the moral philosophy inherent in democratic forms of government (Popkin & Stroll, 1993).

Mill wrote against an historical context that viewed liberty in terms of protection of individuals against the excesses of authority. While Mill acknowledged that democratic forms of government allowed the development of self-interest groups, those in power were, in principle, accountable to the people. Democracy needed to avoid imposing majority rule on all, to protect the minority voice, unless minority actions threatened to be harmful to others. The focus is clearly on what is best for the most. Similarly, utilitarian social outcomes focus on a community level; it is impossible to cater for all individuals, so entities should be concerned with providing the 'greatest good for greatest number of individuals'. The impossibility of determining all possible resulting outcomes from an action, and the dependency upon subjective assessments, reduces the impact of the utilitarian rule of objectivity.

Yet, as a moral theory underpinning democratic conventions, utilitarianism has a high level of face validity. Since the 1970's, there has been a general movement away from centralised collectivist government roles towards economic rationalism (Hughes, 1994). In a context of scarce or limited economic resources, it makes good common sense to try and benefit as many people as possible. This holds true in health, as in any public sector arena – until we are personally affected (detrimentally) by an action designed to benefit the 'greatest number.'

Utilitarianism, whether consciously promoted or not, provides philosophical justification for any attempt at an equitable system where rationing is a necessity.

In conditions of limited resources outstripped by demand, employees within a public sector entity need to prioritise applicants. Whether the entity focus is individuals or community, ranking deserving candidates for assistance allows decisions to be made as to "most" and "least" deserving. Public sector providers (as in Figure 1) necessarily consider where the greatest good within the pool of recipients can be obtained; the claim can be made that public sector entities are, by definition, utilitarian. Regardless of entity focus, restricted resources necessitates a utilitarian outlook over decision-making.

Case Study

The paper now considers an example from New Zealand's public health sector. Following a description of the entity, the discussion attempts to ground the theoretical discussion above to a real-world organisation, the Pharmaceutical Management Agency (PHARMAC). This organisation was chosen because of its central role in New Zealand's public health sector, namely, the provision of pharmaceuticals as funded by the government to the public of the nation.

Created in 1993, PHARMAC has survived relatively unscathed through the various structural reforms in the public health sector since the late 1980's. It has responsibilities to both the public and to the government; it has a clearly articulated and unambiguous purpose, legislated by an Act of Parliament. The organisation is relatively small, and has had significant impact on the management of pharmaceuticals within communities (funding and access to and availability of products). The results are not necessarily generalisable to the public health sector as a whole, but it might provide some measure of insight into how to adapt and accommodate the conflicting demands placed on such organisations.

Information concerning PHARMAC was obtained from two principal sources. The official website provided extensive documentation with respect to policies and procedures, commentaries and annual financial reports. As well, a series of semi-structured interviews with five of the senior managers provided a more personalised insight into this organisation. The interviews were conducted on-site, and were between one and two hours each in length. In order to retain confidentiality, the quotations (which are used below to illustrate the text) are not attributed to any individual. There is also, by way of a secondary source of information, a continuing debate in the media concerning PHARMAC's funding decisions.

Background

As often seen in large private sector organisations, in an effort to reduce transaction costs (Scott, 2001), various functions within the New Zealand public health system have been contracted out, combined or separated. One such example is the Pharmaceutical Management Agency (PHARMAC), created in 1993 in order to more efficiently manage burgeoning government expenditure on the nation's pharmaceuticals.

PHARMAC is a Crown entity, a statutory corporation, and as stated in recent legislation (New Zealand Public Health and Disability Act 2000) has as its primary objective "...to secure for eligible people in need of pharmaceuticals, the best health outcomes that are reasonably achievable from pharmaceutical treatment and from within the amount of funding provided" (s47). The legislation also describes more specific operational functions (s48), including the maintenance and management of a national pharmaceutical schedule (formulary), and the determination of eligibility criteria for the provision of subsidies. In recent years, the functions have expanded "to engage as it sees fit, but within its operational budget, in research ..." (s48(c)), plus the "responsible use of pharmaceuticals" (s48(d)). Since February 2002, PHARMAC has also been authorised to manage the purchasing of a limited range of hospital pharmaceuticals.

The institutional structure of PHARMAC is one of appointment and advisory groups. The Minister of Health appoints a board of directors of up to six members, which in turn appoints the chief executive. A clear division is maintained between the board of directors (concerned with policy and strategy) and the operational management structure (responsible for implementation of this policy and strategy). Standing committees (legislated under section 50) provide expert advice and community advocacy, but are not involved in operational matters.[12]

With respect to assessment of performance, a variety of documentation is required within PHARMAC relating to all major decisions made. This applies to both the "supply side" activities (maintenance of the national formulary, the schedule of subsidies and the negotiations with pharmaceutical companies) and to the "demand side" activities (the 'responsible use' of medicines function). As with the public sector in general, PHARMAC is required by the Public Finance Act 1989 to submit annual financial reports to the government; these reports, along with other decision-related documents, are available on PHARMAC's website and form the basis for public scrutiny. With thirty-seven full-time staff in 2003, divided into seven management teams, PHARMAC is a small cohesive organisation, created to fulfil a specific function within New Zealand's public health system.[13]

At an operational level, in order to fulfil its principal objective of the "best" health outcomes within limited financial resources (a capped budget), reference is made to a specific list of Decision Criteria (Operating Policies and Procedures, 2001, s2.2). Clinical risks and benefits, the availability of pharmaceutical products, and cost and cost-effectiveness considerations are specified, and a cost-utility system is employed which relies on quality adjusted life years, or QALYs.[14] Under this approach, various medical and disease conditions are assessed and weighted according to life expectancy and the quality of remaining life years. A measure of the relative economic worth of various interventions and treatments (Phillips & Thompson, 1998), it is used to provide a common measure of utility.

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[12] The Pharmacology and Therapeutic Advisory Committee (PTAC) and sub-committees comprise clinicians who have either applied directly for membership or have been nominated by professional medical bodies. The PTAC members are appointed by the Director-General of Health following recommendations by PHARMAC. The Consumer Advisory Committee members, representing community and patient interests, are appointed by PHARMAC's board.

[13] The discussion in this paper does not include the recent pharmaceutical management within the public hospitals of New Zealand, being concerned instead with the longer-established community focus.

[14] QALY is an individual measure but is non-specific and thus able to be generalised across a community. It is a "hypothetical person" measure, as contrasted to data concerning "my uncle Bob."

Difficulties arise when PHARMAC is faced with the need to make decisions beyond core requirements. Once allocations are made regarding a set of unchallenged products, a small number of drugs compete for remaining funds that are insufficient to meet demand. Decisions must be made to greatly improve the QALYs for a small number of people or, for the same cost, to provide pharmaceutical support for more people but at a smaller QALY gain. Economic cost-utility analysis is the principle tool used to help in making decisions, and internal reports are prepared to justify all actions. Evaluations of demand side programmes in progress or already completed are provided to the board of directors, often undertaken by parties independent to PHARMAC. Minutes of meetings by advisory groups are posted on PHARMAC's website. Changes to the Pharmaceutical Schedule are documented and reported. It is claimed that this degree of documentation has improved decision-making processes as well as continuing to provide justification against claims by dissatisfied pharmaceutical companies. And the annual documentation, as required under the Public Finance Act 1989, is available to all interested parties on the website. As described by management:

> *Any major decision, either fiscally major or …contentious, for want of a better word, that has to go through the board and a paper has to be written, the process has to be followed. … People complain about [writing everything down]... Even the best thinkers document what they're thinking because it's so easy to fool yourself. Without a doubt, that's the key to our success really, in terms of accountability. It's in black and white, it's got your name on it, [it gets] presented it to the board.*

Discussions with staff members of PHARMAC provide a strong impression of satisfaction with allocations and decisions made over funding, and a real sense of pride in a difficult job done well. Through PHARMAC, New Zealand joins most developed countries (Birkett *et al.*, 2001) in maintaining a system of government subsidies for pharmaceutical products. Similarly, PHARMAC has been charged with the management and containment of goods for which the demand is rarely driven by competitive forces (Stiglitz, 2000). Medical and surgical conditions which require voluntary or involuntary pharmaceutical interventions control demand, and prices are not subject to economic supply and demand forces in the way that commodities are generally regarded. Given these conditions, the question still remains as to effectiveness and judgment over success. PHARMAC is charged with providing a service for the public benefit; how should "the public" assess whether or not this goal has been achieved? Success for such an organisation can be justifiably assessed by both recipients and funders (as in Figure 1).

Discussion

A framework by which organisational effectiveness can be assessed needs to have reference to its stated purpose for existence, linking it to the societal impact resulting from the organisation's operations (funders and recipients, as in Figure 1). No matter what personal philosophical position is taken regarding the best method for allocating scarce resources, it is evident that PHARMAC has been highly successful in controlling national expenditure on subsidized pharmaceuticals for the body of "eligible people" of New Zealand. The Annual Review 2003

claims that by 1993 New Zealand's annual pharmaceutical bill was increasing at a rate up to 20% annually.[15] Ten years later, in 2003, the actual expenditure on subsidised, non-hospital-funded drugs in New Zealand was only 15% more than the 1993 figure.[16] Using financial performance indicators, the *organisation* consistently keeps within its budget. The cost of equivalent annual pharmaceutical expenditure in Australia, the basis of the "estimated expenditure without PHARMAC intervention" financial measure (Annual Review 2003, p. 12), would exceed actual expenditure in New Zealand by a significant amount**.**

Reflecting *society's* access to pharmaceuticals, new products are listed each year on the Pharmaceutical Schedule, and areas where access to pharmaceutical products has increased are described (Annual Report 2003, p. 24). Demand-side campaigns are expanding, with regional pilot programmes targeting specific community health issues. Programmes already established are proving successful (e.g. "wise use of antibiotics"), both in terms of increased awareness by the community (as determined by independently run surveys) and controlled expenditure on antibiotics (as determined by prescribing and dispensing data). Further, information is available on PHARMAC's website about matters discussed by advisory groups and resulting actions, and some results of negotiations with pharmaceutical companies is also described in the published annual reports.

Within PHARMAC, it is accepted that investment decisions do not involve individual requests, with a limited number of cases allowed under the clauses for exceptional circumstances. Because the focus is on the community, certain types of information are deliberately avoided. The New Zealand Public Health and Disability Act 2000 (s47) states PHARMAC's purpose to be provision of "the best health outcomes... within the amount of funding provided," and efficiency is presumed to lead to effectiveness. As one manager stated:

> *We have a simple goal, and it's pretty straight-forward. ... our objectives are fairly simple, and non-conflicting. And because of that, people can focus pretty easily.*

As well, QALY measures have limitations in themselves, a shortcoming that is recognised, though not significantly challenged for operational matters. Discussion over the appropriateness of QALYs and the acceptance of economic reductionism as an underlying philosophy is a different debate, though arguably just as important. At present, however, there is a high level of goal congruence over the organisation's approach:

> *There isn't much that I'd change about the way that PHARMAC does its business, actually. ... At an operational level there's lots of things that I'd change but they're sort of irrelevant... just about day to day stuff. At a fundamental level, the model's pretty good...*

Individuals within PHARMAC describe the organisational perspective as unambiguously utilitarian, and the economic analyses used are designed to capture community-wide results. Cost utility analysis and QALYs provide information that relate to expenditure programmes, not

[15] Annual Review, 2003, p. 2.
[16] Based on figures for actual expenditure, Annual Review 2003, p. 12.

to individual recipients. Despite some accepted subjective elements (e.g. the assessment of 'quality' in the QALY ranking system), the techniques used are similar to those used in other developed countries also coping with rationed pharmaceutical expenditure (Sculpher & Price, 2003). Difficult decisions concerning investment choices within the array of subsidised pharmaceuticals available to the public of New Zealand depend upon this wider approach. As another manager stated:

> *...we're implicitly assuming that maximum benefit for maximum number, the greatest good for the greatest number, is the sort of morality that we're [using]. We're not getting totally side-tracked by issues around whether one person's QALY is worth more than another person's QALY.*

That is not to say that PHARMAC employees have a blind faith in the model:

> *The big question mark or the thing that we always struggle with is measuring value. That's where all the difficulties lie.*

PHARMAC employees appear to share a remarkable level of goal congruence, resulting in a relative lack of internal tension. Members of PHARMAC seem dedicated to achieving measured organisational success, which is also taken to mean success in outcome terms. There is an almost tangible ethos of pride in the achievements of the organisation.

> *If you asked about what the culture at PHARMAC is, the external view of the culture I think is probably quite different from the internal view. The external view is yep, it's hardnosed, it's bullish, quite an aggressive organisation… Internally… I don't think you could work here unless you believed the fact that there is a limited budget for doing this sort of stuff, and you've got to do it the best that you can.. There's a real belief in we're here to do a good job, however long it takes to do that job. It's a passionate organisation.*

In contributing to this ethos and alignment of objectives, decision-making experiences are deliberate and focussed:

> *I think our over-riding instrument is cost-effectiveness analysis, cost-utility analysis, so that we can compare across treatments. We denominate things in terms of quality adjusted life years, and while there's some implicit assumptions in that whole methodology, it's really the only methodology that gives the means by which to make those trade-offs.*

All published performance indicators point to a singularly successful organisation, as referenced against organisational objectives. PHARMAC has achieved this by combining the three strands previously described in a manner than ensures its success. The organisational cultural and political philosophy is unambiguously utilitarian. Managers within the organisation have high levels of goal congruence, due to individual cognitive perspectives and mutual reinforcement. Most of the individuals who work for PHARMAC come from an economics background that is consistent with the organisation's utilitarian focus. Decisions made (by individuals) on behalf of

the organisation are made from a common point of consciously bounded rationality within the context of an agreed political agenda. Interviews indicate employee pride in PHARMAC's achievements.

Related Tangential Issues for Discussion

But are the stated goals and the toolbox of assessment measures acceptable, sufficient and sustainable? PHARMAC holds a monopoly position for the supply of goods (pharmaceuticals) in New Zealand, and tries to operate competitive mechanisms of bargaining and negotiating with respect to acquisition of the goods from pharmaceutical companies. Running debate continues in the media over PHARMAC's role and success, with some claiming that PHARMAC takes too narrow a focus in its operations, resulting in infringements of personal rights. The points of argument stem from opposition to the wider, utilitarian, focus of the organisation as well as to its reliance on economic evaluation. As one PHARMAC member put it:

> *I think where we have difficulty ... is in communicating what exactly we do, and how we go about it… It would be nice to have more time to spend out consulting with consumer groups... But we still tend to be a little bit reactive... wait for [the Consumer Advisory Committee]to complain about something and then deal with it, when our preference, and what we try to do is to be more proactive.*

PHARMAC has developed a reputation for tough negotiation tactics with pharmaceutical companies.[17] This has undoubtedly caused enormous savings in pharmaceutical expenditure, but confrontational attitudes have not won the organisation any friends within their suppliers. New Zealand expenditure on pharmaceuticals is very small on a world scale (estimated by PHARMAC staff to be less than 1%), which contributes negligibly to pharmaceutical companies' profitability. As long as the international manufacturers are willing to negotiate, PHARMAC can claim success. However, at some point drug prices will not be further reduced, and the "savings made" performance measure will no longer be valid.

Also, there are indications of a growing awareness of the need to expand the organisation's focus somewhat. Some PHARMAC members can see the limitations of the consciously bounded rationality in place:

> *... it's trying to bring some human issues to our decision process without making the system completely distorted and unfair. I just think this a topic where we need more public debate. It's becoming more important, too, because we're getting a whole lot of very expensive drugs that are coming through which are well-targeted. They do work, but the very price of them ... that they will never stack up on a cost per QALY because of the cost of the drug. I mean, that's sort of where... that's where we're going to have to come to some sort of compromise*

[17] PHARMAC engages in a variety of approaches, such as reference pricing, tenders and price trade-offs between therapeutic groups.

A different problem arises with respect to the financial model under which PHARMAC operates. It has a capped budget, and despite PHARMAC's pride in keeping to the budget, there is increasing demand for products and services. In a public health system characterized by increasingly expensive technology coupled with rising demand for goods and services, the limited pharmaceutical budget can only stretch so far. To pursue a singularly economic evaluation system will continue to strain the model.

Concluding comments

The history of PHARMAC evolves from the social context of creation for a specific purpose. To date, it has been assessed according to a set of performance indicators consistent with its stated objectives. There has been a notable lack of political interference through changes of national leadership from Labour to National to Labour, and (at the time of writing) back to a National-led government, coupled with assigned authority to carry out responsibilities. Those working for PHARMAC have encouraged and promoted a unified culture of like-minded individuals, assisting the development organisational pride. Decisions over the best use of limited resources are made with a community-wide impact in mind, and with acceptance that not all individual needs will necessarily be accommodated. The limitations of the QALY measures are acknowledged, as is the need to review decisions made if further evidence comes to light at a later date. Current measures give a good indication of a successful organisation; this is not to say that other measures should not be developed as well. A limited set of metrics, no matter how appropriate, may still give only a limited view into an organisation's activities.

The avoidance of individual ethical discourse may, in fact, be necessary for PHARMAC to fulfil its stated objectives. Consciously bounded rationality results when an organisation simply cannot afford to be concerned with the specifics of individual needs. And yet, from a moral point of view, ethical issues cannot always be ignored: "[l]imits on drug benefits, and how they are developed and implemented, raise important ethical considerations that must be evaluated as rigorously as their economic impact is" (Burton *et al*, 2001, p. 2). Can PHARMAC engage in meaningful ethical debate within its utilitarian philosophy?

That PHARMAC's performance is assessed in global terms, with respect to 'the community' and not to individuals, will inevitably create conflict. Special interest groups within the community who feel their beneficiaries are not getting a fair deal (some proven drugs are not subsidised) will contest the utilitarian viewpoint. Some within the medical profession complain about the difficulty of getting exceptional circumstances recognized; they also point out that drug interchangeability (which results from subsidy policies) is not always straightforward at the patient level. Drug companies wanting bigger profits and a bigger share of the market complain that it is difficult to get new drugs into the market. But PHARMAC does not come into conflict with the government, because it is 'doing a good job.'

No doubt the debate will continue over the success of current neo-liberal approaches and the role of the health sector as an industry (Di Tommaso & Schweitzer, 2001) with respect to provision of health in New Zealand. PHARMAC as an organisation is required to perform within an agreed budget, though problems with such free market philosophies are recognized: health in

general does not neatly fall into a model of competitive markets (Stiglitz, 2000). And, as Boston *et al* (1996) say, "[t]he rationing of health care in line with 'capped' funding inevitably gives prominence to hard cases" (p. 176). Questioning the edges (the mandate and the individuals) must continue.

Within this social context, accounting language is often relied upon to develop performance indicators. As long as contractual pseudo-market forces are applied to the public sector, then accounting language will continue to be important. PHARMAC uses economic methodology (cost utility analysis), but the reporting language is accounting (savings made, budgetary targets). This has become generally accepted, albeit rather narrow and limited in focus. The challenge is to ensure common meaning while expanding this set of performance indicators.

The New Zealand public sector reforms of the 1980s were notable for the emphasis given to specification of performance and outputs (Scott, 2001), despite the original intentions to focus on outcomes. This was in reaction to prior performance expectations either being implied only, or expressed in compliance terminology (inputs consumed). An output focus was seen as the means to increase transparency and clarity of expectations (Scott, 2001). Operationalising the relationships between outcomes and outputs needs to resist the human need for simplification, and recognise the relationships between, and influences upon, organisational actions.

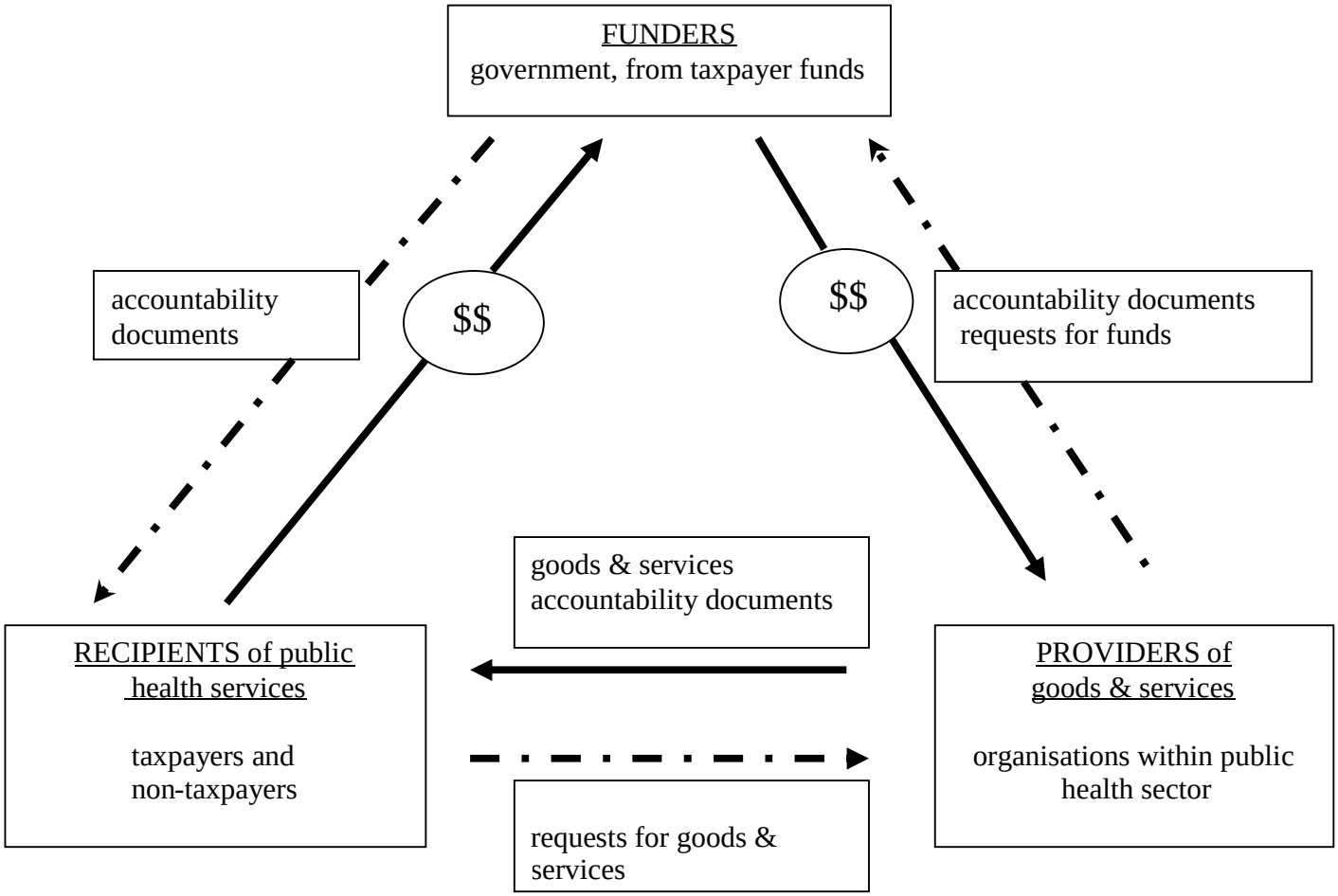
Organisations are judged as stand-alone entities, in the public sector with respect to the ability to respond to community health needs (and also to act within the constraints imposed by authoritative over-arching guidelines). Individuals within an organisation assess circumstances and the knowledge available, then make decisions by which the organisation is judged. Individuals are affected by both cognitive perspectives and role theory. Individuals as managers are further influenced by surrounding cultural and political forces, and these potentially conflicting tensions need to be acknowledged. Incentives and constraints within this complex set of relationships can be separately identified, but are necessarily intertwined in practice.

There is a natural inclination to rely on readily available performance measures, though these tend to be quantitative (and often financial) in nature. Drawing on reflections concerning critical accounting (Lodh & Gaffikin, 1997), this paper offers some reflective thoughts into the structure within which quantitative measures (often drawing on accounting language) might be better informed. Many perspectives and paradigms of the world exist within the realm of critical accounting research, each with "...value-laden assumptions, beliefs, forms of rationality, tools and tribulations, tactics, epistemic and ideological strands" (Lodh & Gaffikin, 1997, p. 438). The theoretical discussion has been located in this paper by way of specific example (PHARMAC) into the context of New Zealand's public health system, indicating how one organisation provides an internally consistent world-view.

It is suggested that the most appropriate paradigm, and thus underlying rationality, is context-dependent. By definition, there will never be a single, all-encompassing world-view against which an organisation can be judged. In those famous words: *it all depends.*

Figure 1

PARTICIPANTS IN PUBLIC HEALTH CARE



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