‘Déjà vu all over again’? Programme Budgeting, Resource Allocation by Health Authorities and the Contemporary NHS.

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Abstract
This paper concerns the current revival of interest in techniques advocated for resource allocation by purchasers of health care during the period of the internal market in the English NHS. In particular, Programme Budgeting and Marginal Analysis (PBMA), an approach strongly advocated by some health economists, is examined.

Since the election of the 'New Labour' government, the NHS has undergone a series of structural re-organisations. Ironically, however, the current structure is similar to the 'internal market' which the government formally abolished on taking office; hence the renewed interest in techniques promoted at that time.

In the paper a research project is discussed, which investigated resource allocation and performance evaluation by Health Authorities during the period of transition from the internal market. It suggested limitations to the use of techniques like PBMA. However, the current situation regarding Programme Budgeting seems more promising as a more pragmatic version of the approach is now advocated, which should be more appropriate.

This issue is currently significant because Programme Budgeting is being developed by the Department of Health for the resource allocation decisions of health care commissioners.

Introduction
The past ten years have seen a dizzying series of changes to the structure of the National Health Service in England. Indeed Paton (2006) identifies five distinct stages of structural change in the evolution of the New Labour's health policy. This begins with an attempt to abolish the internal market, whilst retaining the 'purchaser/provider split' (Department of Health, 1997); but it ends (for the time being, at least) with Primary Care Trusts (PCTs) losing their provider function and taking a more strategic role, whilst purchasing reverts to GP practices (Department of Health, 2005). Each stage is marked by an increase in 'market rhetoric' and the end point strongly resembles the later stages of the internal market ten years earlier.

The experiences of Health Authorities in purchasing health care at that time are likely, therefore, to have renewed relevance. It is not suprising that there has been a revival of interest in techniques for resource allocation by health commissioners, such as programme budgeting, which formed the basis of experiments in the internal market. Consequently, it seems apposite to re-examine a research project carried out in the period of transition from the internal market to the New NHS.

In this paper, I report on an inter-disciplinary study into resource allocation and performance evaluation by Health Authorities in that period. The results of the interview and questionnaire stages of the study supported the view that it is impractical to apply comprehensively rationalistic approaches, such as the form of programme budgeting then advocated, in this context. This resembled previous studies, accessed in the literature review, in indicating the limitations of conventional health economics.

There has been a revival of interest in Programme Budgeting recently, however, and the Department of Health is adopting a version of the approach for resource allocation decisions by health care commissioners in the English NHS. Some reservations might be held concerning this in the light of previous experiences, but contemporary research into the applications of programme budgeting is needed, particularly as recent advocacy seems to support a more pragmatic version of the technique.

This paper adds to the extant literature both by reporting on the commissioning practices of health care purchasers and relating that experience to more recent developments in resource allocation.

The Research Project

This study consisted of

- a literature review;
- interviews carried out with staff at two Health Authorities, chosen because they contrasted in terms of socio-economic factors, urbanisation and industrialisation;
- survey questionnaires, sent to all other Health Authorities in England.

Authority A was dominated by a large industrial city and had quite a high level of socio-economic deprivation. Authority B had many large towns separated by rural areas.

The study was intended to test the following linked hypotheses:

i) Commissioning decisions were based largely on historical patterns of spending ('incrementalism').
ii) Methods of budgeting were concerned mainly with costs and inputs and tend to neglect outputs and outcomes.
iii) Performance indicators were relatively underdeveloped and, where they did exist, were concerned mainly with cost containment.
iv) The processes of priority setting between and within programmes were not well integrated and were usually dominated by 'political' considerations within organisations.

A further issue which emerged as particularly significant during the study was the extent to which conventional health economics is useful in explaining and/or improving resource allocation decisions in health care. Conventional, or mainstream, health economics is characterised here as a formalised, evidence based approach to decision-making, grounded in means-ends rationality and intended to provide definitive judgements on choices.

The research had a triangulated design, with each part of the study complementing each other. Issues to be covered in the interviews were identified from the literature review and issues for the survey questionnaire from both the review and the interviews. Studies of priority setting in the public sector were found in the economics, accounting and political science literature and reviewed.

The interview stage of the research had internal validity, as it gave a good representation of the views of those making resource allocation decisions in the two organisations, although the extent to which the findings of case study research can be applied beyond the original case is always debatable. The use of the questionnaire countered this, however, although the response rate was rather disappointing at around 20%. Nevertheless, the triangulated design should compensate for any shortcomings in any stage of the research.

Literature Review

One of the most widely welcomed aspects of the 1989 NHS reforms was the requirement that Health Authority resource allocation decisions should be based on a systematic assessment of needs (Department of Health, 1989; Shanks, Kherad and Fish, 1995). Following the abolition of the internal market, the retention of the purchaser/provider split was intended to motivate commissioners to continue assessing how to best allocate their scarce resources (Department of Health, 1997).

However, Health Authorities varied greatly in methods for setting priorities (Obermann and Tolley, 1997). Most of the approaches adopted have been criticised persuasively by mainstream health economists for, inter alia, neglecting the potential costs and benefits of competing options for health care. Instead they have advocated the techniques of programme budgeting and marginal analysis. As a basis for budgeting, programmes have the advantage of corresponding to how care is actually delivered to the recipient, both within and across organisations, rather than reflecting organisational structures. Furthermore, by focusing on changes at the margins, it is claimed that the health economics approach directs decision-makers away from the mass of data to the key issues (Cohen and Henderson, 1988; Mooney, 1994).

Studies of Health Authority commissioning suggested that there had been some movement from incremental to more formalised methods of priority setting during the period of the internal market (Klein and Redmayne, 1992; Ham, 1993; Obermann and Tolley, 1997). Significantly, in the early stages of the internal market, a number of studies reported on projects aspiring to implement the mainstream health economics approach (e.g. Donaldson and Farrar, 1993; Cohen, 1994; Cohen, 1995; Craig, Parkin and Gerard, 1995; Honigsbaum, Richards and Lockett, 1995; Madden, Hussey, Mooney and Church, 1995). These studies remain relevant; not least, because they are cited as exemplars by more recent advocates of PBMA (e.g. Department of Health, 2007).

In the literature review, we also examined these papers and it was notable that, in practice, they had been carried out to some effect, but far more pragmatically than the theory underpinning conventional health economics would suggest. This is due not only to technical difficulties, but also partly to the impracticality of comprehensive evidence-based evaluation (e.g. lack of firm evidence base and insufficient information), and partly to the complex behavioural aspects of health care decision-making, neither of which is accommodated in the underlying theory.

The pragmatic approach seems somewhat ironic in the light of the criticism of other approaches as theoretically unsound, although the studies themselves do contain undoubted insights. The inability to implement comprehensively rationalistic procedures echoes the failure of earlier attempts at 'rational' methods of resource allocation in the public sector (see, for example, Elcock, Jordan and Midwinter, 1989; Jones and Pendlebury, 2000). This argument supports those who advocate 'muddling through elegantly' (Hunter, 1997). A modified version of the health economics approach, however, could be compatible with this perspective and give valuable results in practice (see Honigsbaum et al, 1995). I shall argue later in the paper that this has been the trend more recently (see Peacock, Ruta, Mitton, Donaldson, Bate and Murtagh, 2006).

Interviews

In general, the results of the interviews at the two health authorities gave support to the original hypotheses of the study. It appeared, however, that target setting derived from the Health of the Nation document (Department of Health, 1992) was more significant than expected and incrementalism somewhat less so.

Budgeting seemed mainly concerned with inputs and costs in both authorities and performance was measured largely in terms of activity and output. Outcome indicators were seen as costly to generate and, where they existed, there was a range of diverse measures making comparisons difficult. Quality Adjusted Life Years and similar techniques were not used, although there was an awareness of their existence. Indeed, there was little, if any, evidence of the utilisation of techniques derived from health economics.

Decision-making did not appear to be well co-ordinated between programmes and internal political pressures and constraints, not surprisingly, played an important role in resource allocation. Similarly, whilst there were attempts at consultation with the community, participation and accountability were regarded as problematic.

In Authority A, the process of resource allocation did not appear to be well integrated or well understood by all participants, although there were serious and significant attempts at innovative approaches within this organisation. For example, the Authority's priorities were set in its Health Investment Plan, which formed the basis for funding new activities and any significant developments of existing services. However, overall decision making at the highest level seemed constrained by 'political' factors and 'product championing'. Thus an interviewee described the priority setting process in the previous financial year as follows.

"*…We got together in the early autumn to say mental health, heart disease, strokes are the priority areas. So at that time, I thought the intention was that was our priority setting and we would ask for bids in those areas. Then we met again in December time …Those bids that were supported in that meeting got put on the draft…We met again in March…the financial situation had changed. The purpose of the meeting was to chuck things out rather than*

to decide which one to keep in…If there was not a person there who was strongly supporting a particular project it got chucked out."

In Authority B formal processes seemed less well developed and the influence of a relatively small group with long standing professional expertise appeared greater. Their predominant role was said to arise from their previous experience, although it seems likely that their senior positions in the organisation also played a part in this. An interviewee here said, with regard to the internal planning processes

"*Generally, I am quite disappointed with the overall approach to needs assessment*."

Nevertheless, in this authority there were ambitious proposals for a rapid move to much more formalised decision-making. These were only aspirations at the time of interviewing, however, and perhaps, therefore, some scepticism was in order; especially in the light of the results of the literature review. For example, the interviews revealed a lack of clarity about *how* priorities were to be determined and value for money identified in the new priority setting process.

It should be stressed that none of the above is intended to be unduly critical of the Health Authorities concerned. While the processes of resource allocation were capable of improvement, what is mainly illustrated is the impracticability of applying comprehensively rationalistic approaches in this context.

Questionnaires

Respondents were asked firstly to explain what they understood by the term 'priority-setting'. The single most common answer was "getting the most out of scarce resources." Over 52% of the sample gave that or a similar answer; i.e. one containing at least some implication of cost-effectiveness. Conversely 18% gave answers along lines of meeting needs or determining levels of service without specific reference to costs or benefits. Rationing was cited explicitly in 8% of the answers.

The next question asked whether there was a formal procedure for priority setting in the health authority. Whilst a majority of answers (62%) acknowledged that there was such a procedure, a significant minority (38%) said there was not. Those respondents who answered yes to that question were asked to describe the process of priority setting in their authority. (A handful of respondents who had answered no also went on to describe a process, presumably one they considered to be informal.) The most common response (37%) referred to Health Improvement Programmes (HimPs) and related frameworks. (HimPs were plans drawn up by Health Authorities on the basis of local needs and provided a framework for the commissioning decisions of PCTs in the early stage of New Labour's reforms.)

The extent to which various methods of priority setting were considered to be important in the authority was then addressed. Three methods frequently criticised by health economists for neglecting costs and benefits were

considered to be important or very important by a very high proportion of respondents. These were incrementalism (80%), target setting (80%) and total needs assessment (77%). In contrast programme budgeting and marginal analysis, whilst still scoring quite highly, was regarded as important or very important in 45% of the answers. Social audit/rapid appraisal, which requires significant involvement by the local community, was regarded as important or very important by only a third of the respondents. Curiously, a quarter of the sample must have regarded both PBMA and, for example, incrementalism as important/very important for setting their priorities. This implies a willingness to adopt a very mixed approach to resource allocation.

Predictably, political initiatives and agendas were considered to be important or very important by 99% of respondents (71% very important). The opinions of GPs (98%), Public Health doctors (97%), clinicians in trusts (90%) and Health Authority managers (92%) were also considered very influential. By contrast, the views of other health professionals (51%), the public (55%) and current patients (33%) were less influential. Power and status seem to be significant factors here, thus reinforcing the importance of behavioural aspects in decision making referred to earlier.

The lowest ranking was for the opinions of health economists. Whilst a quarter of the sample considered these to be important, only 1% thought them to be very important. However, this does show some recognition for what is, after all, a rather new profession. Moreover, 59% of the sample replied that more information concerning cost-effectiveness or cost-benefit would be very important and 53% desired more information about equity. Only 16% of respondents gave a similar response concerning more information on the views of the general public.

These results suggest that there was a concern to incorporate considerations of costs and benefits into resource allocation decisions, but it seems clear that the approaches adopted were pragmatic and eclectic. Not surprisingly, political and professional influences had a marked effect on resource allocation; whereas, disappointingly, consultation with the general public was regarded as less important. Thus the results reinforced the conclusions drawn from the earlier stages of the study.

Recent Developments in Programme Budgeting

According to Lockett, Raftery and Richards (1995), Programme Budgeting first engaged health economists in the early 1990s and has its origins in the controversial approach known as Planning, Programming and Budgeting Systems (PPBS). As they say,

"*The recent enthusiasm for programme budgeting … would be less disconcerting if the new–found converts showed any awareness of the history of the technique, all the more so given the highly unfavourable judgements that have been made about programme budgeting in the 1970s …*"
(Lockett et al, 1995, p.90)

(See Jones and Pedlebury, 2000, for a history of PPBS.)

It is not surprising that the rapid uptake of interest in this approach was associated with the early stages of the internal market, as purchasers sought out frameworks for priority setting in order to support their resource allocation decisions. Similarly, it is no coincidence that interest in Programme Budgeting has revived as the New NHS has come to resemble the internal market more and more. (See, for example, Department of Health, 2002; Ruta, Mitton, Bate, and Donaldson, 2005; Peacock et al, 2006.) Indeed, a revived interest in 'rationalistic' approaches seems characteristic of 'New Labour'. Thus Keenan (2000) argues that Best Value, the performance measurement framework introduced into local government in the UK in 2000 (and subsequently subsumed into the Comprehensive Performance Assessments in 2002) contained significant elements of PPBS and Zero Base Budgeting. (See Jones and Pendlebury, 2000, for an account of this technique and its history, which somewhat resembles that of PPBS.)

However, the later form of Programme Budgeting does seem to have important modifications. As Mitton and Donaldson (2003, p.102) say, "… *different authors have proposed various formats*" for programme budgeting. Mooney, Gerard, Donaldson, and Farrar (1992) promoted an earlier conception of the process as follows:

1. Define programmes
2. Establish programme management groups
3. Define sub-programmes
4. Focus on the margin
5. Draw up incremental/decremental wish lists
6. Cost wish lists
7. Examine the relative benefits of changes in spending on programmes/ sub-programmes
8. Make resource allocation decisions

It is interesting to compare this with Mitton and Donaldson's own later and much less rigid format based on "*five questions pertaining to the use of resources*" (Mitton and Donaldson, 2003, p.102):

1. What are the total resources available?
2. How are these resources currently spent?
3. Where might more resources be allocated and what would be the effectiveness of this spending?
4. Are there areas of care which could be provided with the same effectiveness, but at lower cost?
5. Are there areas of care, which are effective, but should receive less resources because spending elsewhere would be more cost-effective?

Mitton and Donaldson (2003) advocate involving both the public and experts in decision-making whilst still stressing the need for evidence based decision-making. In general, the tone of the approach to programme budgeting they propose seems more pragmatic and practical than before. There is a welcome recognition of the need for PBMA to be adjusted for organisational fit, for economic evaluation to be part of a broader priority setting framework and for

the inclusion of equity as well as efficiency into the criteria for decision-making. Moreover, it is ultimately the relevant decision-makers who must decide whether and which changes in resourcing should take place.
In addition, an intriguing and most commendable aspect of Mitton and Donaldson's paper is their recognition of the need to draw on organisational theory. As they say,

"*Of course, some unresolved issues do remain within the PBMA framework and its application…Perhaps the most important point is the need for more work in the area of health organization behaviour, whereby experts in that field can work collaboratively with health economists…to positively impact strategic planning and priority setting activity*."
(Mitton and Donaldson, 2003, p.103)

Nevertheless, they claim that this approach would still adhere to the key economic principles of the margin and of opportunity cost. Strictly speaking, however, this would mean identifying the marginal cost and marginal benefit of each additional unit of output *and* assessing the opportunity cost of foregoing the benefit of any other possible use of the incremental spending. Whilst this is at least conceivable in the traditional 'widget factory', it is very difficult to see how it could possibly be applied in the complex context of health care.

Indeed, what normally happens in the application of programme budgeting is that quite large blocks of budget allocation are moved around budget headings on the basis of quite imprecise notions of benefit (and even of cost), based on expert or informed lay opinion. This seems much closer to Zero Base Budgeting than marginal analysis (or, to be more precise, a variant known as Priority-Based Budgeting; see Connolly and Ashworth, 1994).

Programme Budgeting and the 'New NHS'
These developments are not only interesting in themselves, but also significant because, following the initiation of the national Programme Budget Project which began in 2002, the Department of Health is adopting the technique for use in the NHS. The project exists to develop information so that NHS agencies can carry out programme budgeting which, in this context, is defined as

"*a **retrospective** appraisal of resource allocation, broken down into meaningful programmes, with a view to tracking **future** resource allocation in those same programmes*."
(Department of Health, 2007, p.4 – my bolding)

Consequently, financial information concerning all SHA and PCT expenditure is to be analysed into programmes of care based on medical condition. However, as usual in such exercises, the number of categories represents a compromise between the appropriate degree of specificity and a manageable range of programme budgeting classifications (Department of Health, 2007). The Department of Health acknowledges that the implementation of programme budgeting is a process which will require refinement over a long

period. Thus, for the time being, a category of Other will be maintained for activity which cannot be identified with medical condition, preventative action or social care. Moreover, some difficulties are expected to persist indefinitely. For example, it is accepted that not only is information on diagnosis for community patients not collected routinely at present, but also that the approach adopted in different Trusts is unlikely ever to be totally consistent.

The purpose of introducing programme budgeting into the NHS is stated as being to obtain comparative information which would assist in the identification of where resources are invested currently, the evaluation of the efficacy of current patterns of resource allocation, assessments of the most effective ways of investing in the future and improved understanding of issues concerning equity.

Therefore, the Department says,

"*Programme Budgeting is much more than an accountancy tool. The information produced through the implementation of Programme Budgeting will help inform and improve commissioning decisions*."
(Department of Health, 2007, p.6)

However, even allowing for it being a technical guide, it is striking that the manual gives very little guidance as to how this is to be achieved. Thus, presumably, health agencies will be free to experiment in ways of using programme budgeting to aid management. It is also intriguing that there is only one reference to marginal analysis in the document.1

This suggests some pragmatism in application which is to be welcomed, although there is the danger that the approach may only be adopted ritualistically and merely become an exercise in retrospective book-keeping. It will be important, therefore, for research to be carried out which traces the ongoing development of programme budgeting in the English health service. Whilst the technical aspects of implementation should be investigated, there must be a danger of concentrating on the technicalities of information systems, costing and financial reporting. So it will be important to also examine the social, organisational, cultural and behavioural issues which will arise as the technique is put into place.

Conclusions

The similarity of the current structure of the NHS to the internal market has been established and the desirability, therefore, of referring back to earlier studies, such as the one on which this paper is based, seems validated. All three stages in the study gave general support to the original hypotheses. Difficulties with availability and reliability of data, the importance of internal 'political' pressures and lack of integration within decision-making were found in the Health Authorities in the study. This suggests that an unmodified form of conventional health economics cannot be applied successfully to either the study or the practice of resource allocation in health care. The findings thus repeated previous research by indicating the limitations of 'rationalistic'

approaches to decision-making. A modified version of health economics, however, could help to 'muddle through' more elegantly.

In so far as these conclusions are likely to be still valid, they suggest limitations to the efficacy of market mechanisms in this context and to claims that techniques like programme budgeting can be used to determine (as opposed to facilitate) the commissioning of services, although more contemporary research would be valuable.

Programme budgeting is a particularly significant topic at present because the technique is being promoted for adoption in the English NHS. However, there are intriguing issues concerning this. One the one hand, the Department of Health has high aspirations for the use of the technique, which past experience suggests is unlikely to be attained. One the other hand, what the Department is currently mandating and supporting might be better described as programme costing than budgeting. There may well be a middle way between these two positions which will prove viable. At the same time, it should be acknowledged that academic accounts of programme budgeting do now recognise the need for a more pragmatic version of the technique. This should fit better with the organisational and behavioural aspects of resource allocation in the complex context of health care and would also support inter-disciplinary study.

Footnote

That is apart from the glossary (Department of Health, 2007, p. 54) which gives this notably broad brush definition "*an appraisal of the added costs and added benefits when resources in programmes are increased or deployed in new ways*."

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