AN ECONOMIC ASSESSMENT OF THE PRIORITY CRITERIA FOR ELECTIVE SURGERY IN NEW ZEALAND

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Student Paper No.2

Published by
Centre for Public Policy Evaluation
College of Business, Massey University
Palmerston North
NEW ZEALAND

July 1998

ISSN 1174 - 5193

ACKNOWLEDGEMENTS[*]

I wish to thank all those who have contributed in some way to this assignment. To my supervisor Mr Stuart Birks for his valuable advice and guidance. To Stuart Bruce, a researcher with the Labour Research Unit for his prompt and honest answers to my questions. Most especially to my family for listening to me tell tales of priority criteria for elective surgery and letting me use their computer and knowledge resources.

Deborah Jenkins

[*] This is a revised version of a research report by Deborah Jenkins, supervised by Stuart Birks in partial fullfilment of the requirements for a BBS (Hons) majoring in Economics.

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ABSTRACT

A discussion of the issues with special relevance to economics surrounding the development and implementation of priority criteria for elective surgery in New Zealand. The criteria were introduced in order to increase the transparency and consistency in the allocation of elective surgery, and involved a move from a waiting list system to a booking system.

The research focuses on the priority criteria developed by the National Health Committee which initially focused on providing criteria for cataract surgery, coronary artery bypass graft surgery, major joint replacement, cholecystectomy, tympanostomy tubes for otitis media with effusion and now includes, prostatectomy and hysterectomy procedures. These criteria take into account both the clinical and social factors that will impact on the patient.

From an economic perspective the research looks at the use of economic evaluation and the appropriateness of its use within the criteria, the different aspects of rationing within the health care system and the impact that rationing has had on the development of priority criteria including the large impact that the political environment plays in the allocation of health funding.

1. INTRODUCTION

The high cost of health care is an issue that many nations are facing as technological advances and longer life expectancy means that the amount spent on health care comes under increasing scrutiny. One way in which Governments ration health care is by using a waiting list system, however there has been dissatisfaction as to the "fairness" of the criteria used, and disagreement with regard to who should get surgery.

The Priority Criteria developed by the National Advisory Committee on Core Health and Disability Support Services (National Health Committee) is aimed at allowing for more than just clinical factors to be added to the determination of the waiting list.

The issue is which criteria should contribute to the decisions made by surgeons about the priority of one patient over another when it comes to elective surgery. Where can economic costs and benefits as well as social costs and benefits be adapted to contribute to this process? To what extent can those waiting have social factors such as age, employment and dependency taken into account when the decision regarding their surgery is made? Is there a place for economic assessment in the determination of priority criteria for elective surgery in New Zealand?

The aim of the priority criteria is to reduce the length of time spent on waiting lists for elective surgery. Waiting lists are not considered to be a very accurate measure of the level of access to surgery, the Ministry of Health previously preferred to use "throughput" in order to measure efficiency, and secondly the data that is available on this is not very accurate as the Ministry of Health states that the lists are not generally audited to remove deceased, treated or moved people. So instead of using waiting lists, the preferred method of measurement is now waiting time.

As part of the health reforms that were started in 1992 by the National Government, the National Advisory Committee on Core Health and Disability Support Services was established to "advise the Government on the fairest and most effective use of the public money" spent each year on health and disability support services. With this objective in mind the Committee was asked to review the waiting lists in New Zealand for elective surgery and to suggest any improvements that could be made to the current system to make the fairest and most effective use possible for the nation. The Committee, after much public consultation

that also included general practitioners, surgeons and specialists, recommended that priority criteria for the allocation of elective surgery be set up and that the surgical waiting lists as such would be eliminated and replaced with booking systems that would be determined through criteria as directed by the Committee. The criteria were to be used to undertake analysis of three aspects of the elective surgery process:

- Assess patients' relative priority for surgery.
- Ensure consistency and transparency in the provision of surgical services across New Zealand.
- Provide a basis for describing 'kinds' of patients who will or will not receive surgery.

The National Health Committee in the 1995/96 Core Services Report outlined the National Priority Criteria aims as follows:

1. To ensure the process used to define priority is fair and consistent
2. To enable comparison of need, case mix and severity
3. To enable the development of booking strategies for priority levels
4. To allow comparison of waiting times
5. To ensure the inclusion of social values
6. To define the maximum acceptable waiting time for each level of priority
7. To enable the study of service availability

The time frame for this change of emphasis for the Regional Health Authorities (RHAs), that is the replacement of waiting lists to a booking system based on clinical need, is by 1 July 1998. (Hansard 16/04/96, p.11884.)

This is the first time in New Zealand that factors other than clinical have explicitly been used to determine priority for surgery. Therefore it is intended that the research will critically examine the role that both economic and social factors can and have played in the determination of priority for elective surgery.

In order to examine the use of economic evaluation in the determination of priority criteria for elective surgery there are two areas in which the research will be focused. The first is to look at the contribution that economics can make to the evaluation of health care allocation and secondly to determine the helpfulness or otherwise of its use. This research aims to look

at the issues surrounding the allocation of health care using economic criteria, and not at the calculations in the application.

The National Health Committee objectives include consistency and transparency. It is perceived by many to be difficult in the current political climate, with the use of priority criteria that include economic evaluation, to convince the consumers of the health system that economics has any part to play in determining the allocation of health care resources. The research intends to look at this very issue. The general public do not like the fact that health care is rationed, New Zealand has always rationed its health care resources but instead of the proposed transparent system the rationing was implicit and involved discretion on the part of the general practitioner (Blank 1994, p.98). The issue at the heart of the matter is "How can we get the best use of the limited resources for health care?"

Through its rigorous public consultation process, the Committee found strongest support for a list based on broad categories of services to be provided, rather than one which specified detailed conditions and treatments. An example of the latter is the Oregon list (Strosberg et al, 1992) where a list of 700 diagnostic and treatment categories were defined. The criteria used to rank the treatments included the cost of the procedure, improvement in the quality of life as a result of the procedure and the number of years the improvement was expected to last.

New Zealand has chosen also to look at the access issues surrounding the allocation of elective surgery by establishing firstly priority criteria, and then a booking system. The key element to all of the above is "consistent referral and treatment priority criteria" (Purchasing Your Health 1995/96).

2. LITERATURE REVIEW

Since the health system was restructured in 1992 the National Advisory Committee on Core Health and Disability Support Services (National Health Committee) has published a number of official documents that have attempted to address various concerns raised by the Minister of Health, the Regional Health Authorities (RHAs) and the public. Specifically related to this research is the documentation on the problem of waiting lists and the criteria which could be used to improve patient waiting times.

Each year the National Health Committee publishes a Core Services Report which examines the progress made on their recommendations, and also advocates new recommendations as the research is completed. As waiting lists and their growth are particularly big issues, the Committee has published developments and recommended policy each year with regard to the movement from waiting lists to booking times. The recommendations include using a set of criteria that includes social factors to determine those who need surgery and are therefore 'booked' as such, and those who do not fit the criteria at this stage and so go back to the general practitioner.

In the 1994/95 report the National Health Committee reported that after asking for public feedback there were five key areas of concern:

- fairness and better health outcomes
- consistency
- cost effectiveness
- clear communication
- clinical judgement

and to address these concerns a booking system, instead of the current waiting list system, would be more appropriate.

In this document reference will be made to the term 'waiting lists', this is one of three primary types of surgical patients, the other two being 'acute' and 'arranged'. Acute patients are those which have a condition determined by clinicians to be one which requires immediate attention, arranged patients are semi-urgent in the nature of their requirements which generally have a date of admission for the procedure. Patients defined as those on waiting lists are patients who have a non-life threatening condition which does not have a definite admission date. Fraser et al (1993) define elective surgery as being a total of both arranged and waiting list patients.

Hadorn and Holmes (1997a) address the implication of the introduction of priority criteria for elective surgery in New Zealand. They see the role of the National Health Committee with regard to waiting lists as being "*To develop standardised sets of criteria to assess the extent of benefit expected from elective surgical procedures*"(p.1). This is done using a modified Delphi technique, aimed at using clinical and social factors to determine the priority needs for

elective surgery in New Zealand public hospitals. The procedures that had standardised sets of assessment criteria as at the beginning of 1997 were cataract extraction, coronary artery bypass graft surgery, hip and knee replacement, cholecystectomy and tympanostomy tubes for otitis media with effusion, renal dialysis, prostatectomy and hysterectomy (see appendix for details).

In their second article, Hadorn and Holmes (1997b) specifically address the case of Coronary Artery Bypass Graft Surgery and the implications of the priority criteria implementation on this procedure. The broader issue raised by Hadorn and Holmes (1997 b) is that the results from the development of priority scores provide a more transparent method of measuring the gap between "clinical desirability and financial sustainability" in regard to the allocation of resources to health care.

The injustices of the current system were summarised by a cardiologist in Hadorn and Holmes (1997b) who said

> *Manipulation by referring doctors, friends in high places, MP letters, or persistent nagging, and just slight exaggeration of symptoms, is rampant, and the poor benign patient simply sits on the lists and is leap frogged.*

The article by Hadorn and Holmes (1997b) is one of many that tries to illustrate the hidden flaws in the current waiting list system, a system that is known to have inaccuracies in the collection of data with which health authorities produce published statistics.

Fraser (1993) says that "*Patients should be assessed by defined criteria according to their need and likely benefit (worthwhile health outcome) from the procedure*" (p.8), what appears not to be addressed though is the benefit in an economic sense. This has been researched by Ross (1994) who has determined that economic evaluation is not being used in the determination of health care related decisions to the extent many economists believe it should be, because of the nature of the health care system whereby decisions with regard to treatment are generally made quickly and they need to look at clinical factors rather than just the efficiency of the treatment offered. However this suggestion has been dismissed by some in the health care sector who say that most elective surgery patients have been waiting for their procedure for a number of years or at least months in most cases, therefore the decision

would not generally be made in haste. Other reasons why economic evaluation is under utilised in the health sector, says Ross are that there seems to be a lack of accurate data collected and there is a deficit of expertise in the area of health economics. These are the issues that the National Health Committee have also been facing especially with regard to the collection and availability of accurate and timely data.

This has been illustrated by the debate over the relevance of the use of waiting lists as a measure of the success of the health care system. There is some evidence to suggest that waiting list figures are often inflated due to the fact that they are often not audited regularly and therefore include patients who have either had the treatment undertaken privately, have died, or no longer need the operation for some other reason (Yates, 1987). In New Zealand waiting lists have been criticised as being a static statistic, or a measure of the number of people waiting for surgery at a given point in time, that over-emphasises the last waiting time. The waiting time figure is often used in the media to highlight the conversion of waiting lists to booking times. Another major reason for distortion of the waiting lists is that some medical practitioners previously used the waiting list in anticipation of the need for surgery and therefore if the patient was allocated an operation today, they would not need the operation at this time (Fraser et al, 1993).

The Minister of Health, Hon Bill English has commented recently about the inaccuracies in the reporting of waiting lists for surgery saying *"I have been warned that the data is considered to be historically inaccurate by both the New Zealand Health Information Service which collects the information and the hospitals which report it*." (Media Release 2 October 1997). He has also indicated that another reason for the increase in the waiting lists could be the increased number of people being seen and referred to the specialists for surgery, hence a suggestion of increased efficiency in some parts of the health system.

McGuire et al (1988) is a very general approach to health economics that looks at the issues behind health care without specific discussion related to the area of rationing by way of waiting lists or priority criteria. But in saying this it does discuss the use of economic evaluation and analysis with regard to the distribution of health care within a public system.

In this book they quote Williams (1985)[1] as stating "*the objective of economic appraisal is to ensure that as much benefit as possible is obtained from the resources devoted to health care"* (p.326). How does this relate to the move to a system based on priority criteria, and is this a move toward obtaining as much benefit as possible?

New Zealand is not the only country that is developing priority based criteria for elective surgery. Honigsbaum et al (1995) examine the priority criteria in an international context with comparisons over countries including United States (Oregon), The Netherlands, Sweden and the United Kingdom. In discussing the key elements of priority setting Honigsbaum et al (1995) concede that economic data are used less than they would like, in the determination of the criteria. This is due to the lack of sufficient data available for various chronic conditions.

The determination of waiting lists is dependant on the referrals from other medical practitioners, therefore Fraser in Gray and Bickley (1992) says that the development of effective criteria guide more specifically the decisions of these medical practitioners to develop a system of judgement that is more transparent and more able to be judged nation-wide, rather than waiting times and referrals in one particular region. Agnew (1994) also tries to determine if by numerically ranking patients this can provide equitable outcomes for patients awaiting, in this case, coronary artery surgery. The study examined by Agnew is that which was used as a pilot program for the development of New Zealand's priority criteria.

Blank (1994) says the submissions to the National Health Committee were surprisingly accepting of the need to ration core health care services and that many people do understand that it is very difficult to determine the "most appropriate" way of allocating surgery and that in general the criteria developed did appeal to most of the submissions received. The inevitability of rationing within the health care system brings with it some hard decisions for policy makers to tackle, as Blank suggests "*we may never reach a consensus on how to best distribute health care*" (Blank 1988, preface). The term "rationing" is not popular amongst the general public and users of health care alike, as illustrated by the media circus that surrounded the Rau Williams case in October 1997. The underlying issue in this case was

[1] Williams, A. (1985). Economics of coronary artery bypass grafting. *British Medical Journal* , Vol 291 326-9.

that Mr Williams was in the final stages of renal failure and had mild dementia. Northland Health assessed him but he did not meet the criteria set down for renal dialysis. The national media showed pictures of a dying man with his family, accusations were made through the media that this case was all about rationing health care and economics. It was the mention of this word 'rationing' that sent some members of the public into a state of outrage. The Evening Post (11/10/97) quoted Ms Louise Reynolds, part of a support group as saying "*Mr Williams' death should spark action against the health system which allowed it*" (p.1).

The use of the term waiting lists or rationing in the media have been, as Cullis & Jones (1986) imply, "*an emotive point of discussion among academics, politicians, and the media*". They also suggest that in general the debate generated with regard to the health system consists of more political rhetoric than any strong stance or solution to the long term problem of how to provide the infinite amount of health care with a finite amount of resources.

Coast (1993) says "*The aim of economic evaluation is to compare alternative uses of resources by relating the benefits which result from one particular project to the associated costs in terms of real resource use*" (p,.245), and this is the reason that the National Health Committee saw fit to include some areas of economic evaluation to enable policy decisions to be made. Policy decisions have to be made that bear in mind the limited health care resources available to the public. This is at a time when the pressure for those resources is much higher than ever before as increasing technological advances and the availability of new treatments stimulate increases in demand. Health care is an issue the public are very concerned about as illustrated recently by a poll in the New Zealand Herald (18/10/97) in which the question asked of voters was "What is the most important issue in the country for you at the moment?". In response to that question 33.2% said health services, more than any other single issue.

3. METHODOLODY

- **Literature Review** - a literature review was undertaken to examine previous studies in the area of priority criteria for waiting lists, in New Zealand and to a lessor extent overseas. Also an investigation of information that may be helpful in gaining some more insight into the general area of health economics and health policy was undertaken to obtain an understanding of how economics is generally applied in the area of health care. The research was initially based on the article in the British Medical Journal (No. 7074,

Vol. 314.)'The New Zealand priority criteria project', and the literature review included an investigation of some of the references in this article. Use was made of the ABI-Inform database, Medline and Index NZ to gain some information and abstracts that may contain further development or discussion of the topic from different perspectives. The emphasis was on articles with specific reference to the development of priority criteria for wait listing in the area of elective surgery.

- **Official Documents** - The National Advisory Committee on Health and Disability Support Services has published a number of annual reports and specialised publication on various aspects of the public health debate including discussion on the priority criteria project.

  These were analysed to identify

  - criteria currently used in the development of waiting lists.
  - criteria examined by the committee for use in the development of waiting lists but discarded after public consultation.
  - studies/analysis of the clinical factors involved in the decision making process.

- **Hansard** - To examine the parliamentary debate with regard to the topic of priority criteria assessment for elective surgery as many of the social aspects are likely to have been debated amongst Members of Parliament at the time. It is important to realise that the issue of priority criteria is part of a much larger political debate which has taken place in New Zealand politics for many years, that is the allocation of funding to the health care system in general be it surgical or primary care.

  Comments in Parliament that were used were primarily made by Lianne Dalziel, Jenny Shipley, Bill English and Helen Clark.

- **Letters** - For different perspectives on the various changes that have been made to the health system and more specifically with regard to the priority criteria for elective surgery, the Coalition for Public Health and the National Health Committee were written to requesting information or feedback from them on:

  - their understanding of the economic and social implications of priority criteria
  - whether they felt the criteria used by the National Health Committee was comprehensive enough to be "fair"

- any statistics that they had available that could represent their respective angles on the provision of health care.

In response to a request for information from the Labour spokesperson Annette King, Stuart Bruce, a researcher with the party sent information of the Labour Party's Health Policy 1996.

- **Internet** - Speeches and media releases especially from the Minister of Health, Hon Bill English were available on the internet at **http://www.executive.govt.nz/minister**. This enabled detailed policy information and releases to be available in fast time. The releases meant that it was not necessary to obtain information from the Minister personally as most issues were summed up within media releases this year. Releases from the Labour Party could be found on the Labour Party web site **http://www.labour.org.nz**.

- **Critical Economic Assessment of the Information** - As the majority of the information available is written by either medical specialists, public health lobby groups or economists, the aim of this section is to critically analyse the different perspectives to undertake an economic analysis, while at the same time weighing up the use of social costs and benefits of a priority criteria approach to waiting lists for elective surgery. Primarily it is to determine whether it is valid to use economic principles such as cost benefit analysis in the determination of priority criteria for elective surgery.

4. PRIORITY CRITERIA – CASE STUDIES

4.1 Case 1: Cataract Surgery

The clinical features determined by the National Health Committee as being important in the allocation of surgery involving cataracts, referred to as Ophthalmic surgery are (i) visual acuity, (ii) clinical modifiers including glare and ocular comordity, (iii) the ability of the patient to work, give care or live independently, (iv) the level of disability and (v) the extent of visual impairment (see table 1 for details).

As with all of the determined priority criteria the scoring system is marked out of a total of one hundred points. The level that has been suggested as the cut off point for undertaking

elective surgery is currently around thirty-five points. It has been suggested by clinicians that the optimal point clinically would be twenty-five points.

As is evident from some of the previous sections, the Committee has chosen to include some social factors or values in the determination of the need of a patient for surgery. In the case of cataract surgery the Committee has selected

- the ability of a patient to work, by this one assumes they mean both paid and unpaid work
- the ability to care for dependants that the patient may be responsible for including children, elderly parents or any persons unable to look after themselves
- the ability of the patient to live independently as a result of their condition.

When looking at the extent of impairment in visual function of the patient, examples given include reading, recognising faces, writing cheques, traffic signs, cooking, watching TV and driving. Looking at the section titled "Ability to work, give care or live independently" there is the possibility that this could be affected by one or more of the examples given in the section impairment of visual function. For example if a person cannot read, drive or cook as a result of their medical situation, this could have a substantial impact on whether or not they can work, give care or live independently to the same extent that they would like to, or previously have done. The inference from this is that in counting the social factors separately from the clinical factors the designers of the priority criteria may have introduced an element of double counting to the schedule. It is however possible that the patient may have other possibly health related issues which are relevant.

Another aspect to the inclusion of social factors is whether they should be included at all. If health care is about the clinical factors upon which medical practitioners can make judgements based on accepted medical procedures, then who are doctors to judge, in this case the threat to the patients ability to work, care for dependants or work independently. If clinical factors and social factors are used, who should decide which benefits to society should be accounted for as well as the weighting that these benefits are given. Is the ability to care for dependants more important for those caring for children or those looking after their elderly parents? Are both equally important? Patients can, as they have done in the past exaggerate symptoms or consequences of perceived pain to aid their cause, therefore moving

themselves either from a position where they are not considered ready for surgery, or further up the booking system, to a place where surgery takes place relatively quickly.

The weightings given to each of the five sections differs slightly in the revised national Ophthalmic Scoring System to that published in Hadorn and Holmes (1997a), and as such the discussion is based on the national (revised) scoring system. The first section, visual acuity is given a 40% weighting, clinical modifiers were deemed to be worth 20% of the final decision, section three which included the ability to work, give care or live independently was 10%, level of disability contributes 10% to the decision and the final section looking at the extent of visual impairment is worth 20%. The decision as to the validity of these figures is with the designers of the priority criteria for this particular surgery, but who decides if these figures are arbitrary or not? This will be examined further in the issues section.

4.1.1 Table 1: National Ophthalmic Scoring System

SCORING SYSTEM

National Ophthalmic Scoring System

NAME/LABEL	

SECTION ONE : VISUAL ACUITY SCORE

		6/09	6/12	6/18	6/24	6/36	6/60	CF/HM
		4/06	4/08	4/12	4/16	4/24	4/40	CF/HM
6/09	4/06	0	1	2	3	4	5	6
6/12	4/08	1	7	8	9	10	11	13
6/18	4/12	2	8	14	15	16	17	18
6/24	4/16	9	9	15	21	22	23	24
6/36	4/24	10	10	16	22	28	29	30
6/60	4/40	11	11	17	23	29	35	36
CF/H	CF/H	12	12	18	24	30	36	40

Score 1	

SECTION TWO : CLINICAL MODIFIERS

Posterior Segment disease requiring prompt treatment (eg, diabetic maculopathy)	=	+ 20
Significant glare (eg, PSC Cataract)	=	+ 10
No other co-morbidity factors	=	0
Untreatable posterior segment disease	=	- 10

Score 2	

SECTION THREE : ABILITY TO WORK, GIVE CARE OR LIVE INDEPENDENTLY

Immediately threatened	=	10
Difficult but not threatened	=	5
No problems at present	=	0

Score 3	

SECTION FOUR : DISABILITY

Substantial disability	=	10
Moderate disability	=	5

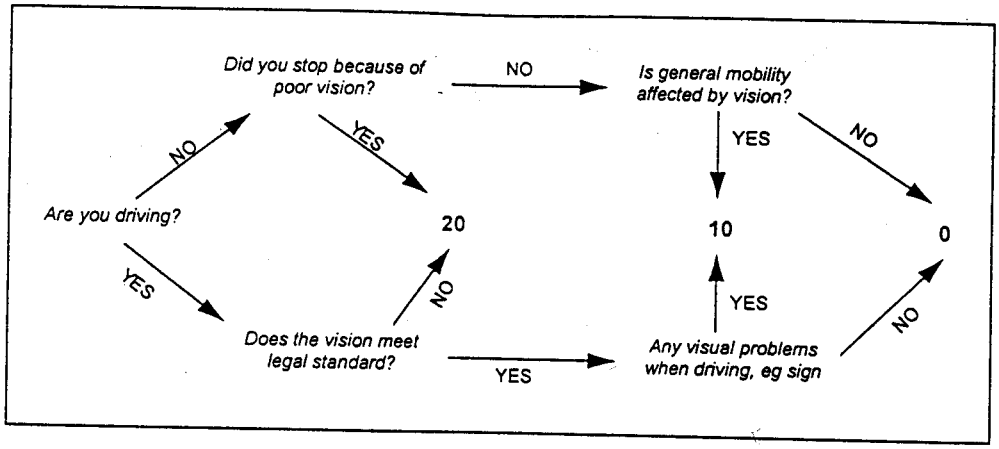
Score 4	

SECTION FIVE : EXTENT OF VISUAL IMPAIRMENT

Score	20 = Unable to	10 = very difficult	5 = occasionally difficult

A.	**Detail** - any relevant one of: *Reading small print/newspaper/bible; doing fine handcrafts, writing cheques*	
B.	**Gross** - any relevant of: *Reading large print, recognising faces, traffic signs steps, cooking, TV*	
C.	**Driving** *(see below)*	

Score 5	



Add all scores (A), (B) & (C), divide by 3
This figure represents the overall average VF points for Section 5.

Add up scores for Sections 1 to 5

TOTAL SCORE	

Coded	

Assessor : . . . . . Date : . . . . . .

4.2 Case 2: Major Joint Replacement

As with the priority criteria for cataract surgery the maximum score the patient may obtain is 100 points. The clinical features that the National Health Committee decided on for the category of major joint replacement, most commonly called hip and knee surgery, as illustrated in table 2 are as follows; (i) Pain makes up 40% of the total consideration, (ii) functional activity of the patient is determined to provided influence on 20% of the decision, (iii) movement and deformity account for another 20% while the final 20% is made up of a section titled (iv) other factors.

The pain section is split up into two distinct categories, those categories being:

- the degree of that pain
- the occurrence.

It is important to note that even before a patient is considered for major joint replacement surgery, they must be on the maximum medical therapy. While this may eliminate much of the problem associated with doctors putting patients on the waiting list prior to the need for surgery, it also has a number of other implications. If the patient is not assessed until the treatment he or she is undergoing is at its maximum, firstly the patient may well be in a large amount of pain for up to six months, if the booking system is working as planned. Secondly the medication that the patient is receiving during that period is likely to be at considerable expense to the tax payer. The priority criteria do not examine the dollar costs to the government of the options other than surgery. This is equally true for other surgical procedures but is more obvious for this one, given the constraint that the patient is not considered for surgery until he or she has reached the maximum medical therapy available.

Once again, as with any assessment criteria, the system is open to abuse through people exaggerating or overstating the amount of pain and suffering they are in. This is not to say that every patient does this, and equally there will be patients who understate their pain, but it would only take a few to start doing this and the system that Mrs Shipley and Mr English denounced as being unfair appears to be not too far removed from the new system that is touted as being fair and consistent.

Both cataract surgery and major joint replacement attribute 10% of the decision criteria to social factors, however different scores within this are given to the different levels of threat to the ability of the patient to work, give care to dependants or live independently. The major joint replacement has a four step scoring system from 0-10, while cataract surgery has only a three step system from 0-10. This may not seem like a large difference but to a patient who is a borderline surgery candidate, this could make all the difference between getting surgery now or waiting longer.

As with the previous case study there is the possibility that double counting may occur in the criteria. In this case functional activity and or movement and deformity may well have been double counted in this set of criteria due to the fact that pain, deformity and ability to walk could also be part of the 20% accounted for by the term “other factors” when considering the patients ability to work or care for dependants. The inclusion of these factors may however reflect the perceived need to take into account other possibly health related factors that do not have enough weight attached to them under the other sections.

4.2.1 Table 2: Revised Draft Priority Criteria for Major Joint Replacement

SCORING SYSTEM

Major Joint Replacement

Revised Draft Priority Criteria for Major Joint Replacement (maximum score 100)

Patient ID: ... .

PAIN (40%)

Degree*	
None	0
Mild : slight or occasional pain; patient has not altered patterns of activity or work	4
Mild - Moderate: moderate or frequent pain; patient has not altered patterns of activity or work.	6
Moderate : patient is active but has had to modify or give up some activities or both, because of pain	9
Moderate - Severe : fairly severe pain with substantially limited activities.	14
Severe : major pain and serious limitation.	20

Occurrence	
None, or with first steps only.	0
Only after long walks (30 minutes)	4
With all walking, mostly day pain.	10
Significant, regular night pain.	20

** Patient must be on maximum medical therapy at time of rating.*

FUNCTIONAL ACTIVITY (20%)

Time Walked	
Unlimited	0
31 - 60 minutes (eg, longer shopping trips to mall)	2
11-30 minutes (eg, gardening, grocery shopping)	4
2-10 minute (eg, trip to letter box)	6
< 2 minutes or indoors only (eg, more or less house bound).	8
Unable to work	10

Other Functional Limitations*	
None	0
Mild	2
Moderate	4
Severe	10

** eg, putting on shoes, managing stairs, sitting to standing, sexual activity, recreation or hobbies, walking aids needed.*

MOVEMENT AND DEFORMITY (20%)

Pain on Examination	
None	0
Mild	2
Moderate	5
Severe	10

** Overall results of both active and passive range of motion.*

Other Functional Limitations*	
None	0
Mild	2
Moderate	4
Severe	10

** Limited to orthopaedic problems, eg reduced range of motion, deformity, limp, instability, progressive x-ray findings.*

OTHER FACTORS (20%)

Multiple Joint Involvement	
No, single joint	0
Yes, each affected joint, mild-moderate in severity	4
Yes, severe involvement (eg, severe rheumatoid arthritis).	10
Severe	10

Ability to work, give care to dependents or live independently	
Not threatened or difficult.	0
Not threatened but more difficult.	4
Threatened but not immediately	6
Immediately threatened.	10

** Difficulty must be related to affected joint.*

TOTAL SCORE _____

4.3 Case 3: Coronary Artery Bypass Graft Surgery

The final case study examined in this research is the criteria for coronary artery bypass graft surgery which has five different sections to determine relative need for surgery. These are(i) the degree of coronary artery obstruction (% diameter occluded), (ii) the level of angina experienced, (iii) exercise stress level, (iv)the left ventricular ejection fraction (applies only to >2 vessel) and finally, as with the other two procedures, (v)the ability of the patient to work, give care to dependants or live independently (see table 3 for details).

In a similar vein to the other two, it could be suggested that there is an element of double counting. If one looks at the category of exercise stress level this could have an impact on the level of care provided to dependants, the ability of a person to work may be compromised, as also may be independent living.

The criteria for coronary artery bypass graft are of a more clinical nature, and are not so open to abuse. For example the medical practitioner can measure both the degree of coronary artery obstruction and left ventricular ejection fraction without referring to the patient for an indication of the level of need. In light of this the Committee were able to utilise published studies on Coronary Artery Bypass Graft more so than for the other priority criteria.

One issue that was raised by the Health Committee was the extent to which age should be used in the determination of time until surgery for each of the criteria. The submissions from participants in this process according to Hadorn and Holmes (1997a) decided that age should not be a factor in any of the procedures except for coronary artery bypass surgery. The reason being that coronary artery bypass surgery has a direct effect on the life expectancy of the patient compared to the other procedures that are generally agreed to have primarily increased the quality of the patients life, not quantity.

If one looks at the reasoning used above, the increase in quality of life should increase the quality for all patients no matter what their age. Why would an 80 year old patient needing a coronary artery bypass get less quality of life out of the procedure than a 70 year old? If the benefit is measured over say five years the improvement would mean the same for each, the exception being that the older patient may not be well enough for surgery. If this is the argument then the counter argument would be that instead of the decision being based on age, why not base it on the current health status of the individual asking the question in relation to

the patients ability to recover successfully from the procedure. This applies equally to the other forms of surgery discussed, in that age affects the number of years someone might benefit from that surgery.

4.3.1-Table 3: Coronary Artery Bypass Graft

SCORING SYSTEM

Coronary Artery Bypass Graft

Degree of Coronary Artery Obstruction	Score
No CAD ≥ 50%	0
1 VD 50-74%	6
> 1 VD 50-74%	7
1 VD (75%)	7
1 VD (≥ 90%)	10
2VD (50-89%)	12
2 VD (both ≥ 90%)	13
1 VD, ≥ 90% proximal LAD	15
2 VD, ≥ 90% LAD	15
2VD, ≥ 90% proximal LAD	18
3 VD	18
3 VD, ≥ 90% in at least 1	20
3 VD, 75% proximal LAD	21
3 VD, ≥ 90% proximal LAD	24
Left main (50%)	25
Left main (75%)	26
Left main (≥ 90%)	32

Note : % diameter occluded.

Angina	Score
Class I	1
Class II	2
Class III	7
Class IV-A	16
Class IV-B	20
Class IV-C	23

Exercise Stress Level	Score
Markedly positive	20
Very positive	16
Positive	8
Mildly positive	4
Negative	0

Ability to work, give care to dependent/s or live independently	Score
Immediately threatened	15
Threatened, but not immediately	5
Not threatened, but more difficult	1

Left Ventricular Ejection Fraction	Score
< 35%	10
35-50%	6
> 50%	0

Note : applies only to ≥ 2 vessel

TOTAL SCORE .....

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5. DISCUSSION OF ISSUES

5.1 Use of Economic Evaluation

The most general use of economic evaluation in the health care system is within the area of cost benefit analysis. Coast (1993) looked at the different levels of economic evaluation and has determined that it included comparing the costs and benefits of different issues including different methods of organising the same activity, different interventions for the same condition, of intervention for individuals with different severities of the same condition and for intervention for different conditions. She also believes that economic evaluation should be used to compare the possible alternative uses of resources by looking at the benefits that can be gained from a particular project, in this case an elective surgery procedure, compared with the associated costs in terms of resources used:

> *"Economic analysis could indicate the most efficient method of allocating a health district's resources across all intervention so as to provide the maximum possible benefit to the community whilst analysing the effect of other possible objectives such as particular equity considerations." (Coast 1993, p.244.)*

Note the use of the word "could" in the above statement regarding the efficiency of health allocation. There are other factors such as the reliability of the data that are used in the determination of costs and benefits. As has been clearly stated by the Minister of Health, Bill English, New Zealand's data are thought to be historically inaccurate. In addition, as has been illustrated by the case studies on the developed priority criteria, the majority of the decision relies heavily on the contribution that clinical factors have to make rather than economic factors, therefore it is important to recognise the use of economics as a component in the determination.

The priority criteria developed by the National Health Committee do not extend the use of economic evaluation to an area as wide as that which Coast (1993) believes is obtainable. The Rau Williams case suggests that the general public prefer a wider view. In general the priority criteria developed thus far rely on the use of economic evaluation for determining costs and benefits of intervention for individuals with different severities of the same condition only. Some suggest that it should rank all the procedures and not just different

severities within procedures. It maybe be possible to set the points required at different levels within each procedure.

The criteria which are relevant may vary according to the areas being considered. For example, pain may be significant for some conditions, for others it may be mobility. This can cause problems when deciding how to allocate resources over areas.

In the determination of benefits, the health sector is spending money in order for patients to benefit, therefore an implicit valuation is being undertaken. An evaluation would require explicit values for these benefits. There is a fundamental budgeting problem as the level of demand is not known in advance. The method most commonly used to determine the levels in New Zealand appears to be to under-fund the budget so that all the surgery supplied is used, so that there is no excess of supply over demand, in fact there is an excess of demand over supply. The excess demand is rationed on a priority basis under the new system and within that it comes down to a first in first served basis, or the person who needs surgery first is attended to first.

One approach that could be utilised in economic evaluation is the use of pain relief as a measure of the need for surgery. How much would an individual be prepared to pay to alleviate the pain he or she is suffering? This question is not asked in the criteria set down by the National Health Committee, but might it be a justifiable way of measuring the perceived benefits of surgery?

5.2 Relative Costs of Different Procedures

The priority criteria do not examine the relative costs of different procedures that are available for the same condition. The most effective treatment in each particular case is not necessarily taken into account. For example, with cataract surgery there are varying patient benefits from two preferred procedures namely intraocular lenses and contact lenses (p.247, Coast 1993). The studies showed that intraocular lenses and contact lenses generally increased the visual acuity and benefit of the procedure to society to the same extent, however the relative cost to hospitals depended on the level of capital equipment available in order to determine the cost effectiveness of the treatment. A treatment that may benefit one patient may not benefit another patient to the same extent and different medical practitioners may prefer the use of one treatment over another based on past experience, lack of new

information or personal reasons. It may not be practical to undertake an exhaustive comparison between the different treatments available, however.

5.3 Short Term vs Long Term

There is often a tendency to take a short term view, particularly given political pressures (see section 5.8).

Long term factors are important in the case of a hip replacement. A hip replacement generally lasts x years, so the medical team or policy makers may decide that it is more economical to put off hip replacement surgery until it becomes immediately necessary. Premature replacement may result in a further replacement when the patient is older and the surgery is riskier. As a result, although the cost of delay may be high (including additional pharmaceuticals, for example), the costs of undertaking the surgery now may also be high, considering the cost of two surgeries instead of one. Implications of timing need to be determined, especially in a cost benefit framework. If the surgery is delayed the cost of drugs needed to maintain quality of life for the patient must be factored into the decision. Other factors such as the severity of pain have been included by the National Health Committee, but the decision as to how much emphasis to put on various factors is in many ways an arbitrary one.

The fact that the delay in the time until surgery brings with it other economic costs is highlighted in the following parliamentary question from former Labour Health Spokesperson, Lianne Dalziel addressed to the Minister of Health, Jenny Shipley:

> "*Is the Minister aware that the waiting-time for joint replacement surgery is one of the reasons for a significant proportion of the bill for non-steroid anti-inflammatories, and is her health systems inability to address seriously the waiting-lists one of the reasons these very same patients will have to pay more for non-steroid anti-inflammatories next month?" Lianne Dalziel (to Minister of Health) 28 February 1996 Hansard p.11165.*

Mrs Shipley's reply focused on the increases that have been made thus far in the number of operations performed each year for orthopaedic surgery, she did acknowledge there were still people waiting for surgery.

Treatment such as that for non-steroid anti-inflammatories contribute to the costs encountered as a result of a decision based on the clinical criteria as well as some selective social criteria, but once again there is no way within the new priority criteria to account for the other economic and medical costs that result.

As waiting time increases so often does the severity of symptoms which bring with them other implications. An example is the mental depression that patients may suffer as a result of their wait until surgery or the impact of being told that although they feel they are ready for surgery, they have not yet met the clinical and social criteria required for this to happen in the public system. In the case of major joint replacement patients are often unable to walk down the road or to catch up with friends and acquaintances, all of which may contribute to the mental or emotional well being of the patient. When determining costs therefore criteria would be fairer if they captured a combination of both clinical and economic factors that impact on the individual and community in the long and short term, which is what the criteria set out to achieve.

5.4 Individual Choice

The process by which the committee decides that each individual is treated on an equal basis assumes that each person has the same utility, when in fact each patient would have a different utility. The treatment that is right for one, may not necessarily reflect what is right for other patients as there are more factors to consider than the treatment or problem itself.

The economic concept of Pareto Optimality advocates that decisions must not make anyone worse off. A potential Pareto improvement criterion can be achieved "*If it could make at least one person better off and no one worse off, if the losers were to be compensated from the beneficiaries gain*". (McGuire et al 1988, p.77) The change of system will involve losers, those who will have to wait longer for treatment, and some will gain by being treated earlier.

The current and proposed system does not take into account the preferences of individuals for treatment. Individuals may prefer a different form of treatment but what health providers must decide upon is where to draw the line between the treatments that they will pay for and those they will not. There are many and varied treatments available, some have been clinically proven whereas others have not and yet patients may prefer the use of an alternative

form of health care. Essentially the problem goes back to the scarce resources with which health care can be provided and the efficient allocation of those resources.

5.5 Less Tangible Benefits

The research alluded earlier to savings that may be able to be made in prescription medicines as a result of timely surgery. This is only one example of a number of benefits that can be achieved as a result of the surgery that often have very little or no direct impact on the patients undergoing the procedure. There are other benefits to the surgery that are very hard to quantify. How can one include these in the calculation of the costs and benefits of the surgery? Is it relevant to do so?

It is hard to put a value on a patient's mental well being. The reduced cost of medication required to combat pain, for example, is a poor measure. Other dimensions are less tangible.

The benefits of surgery are far reaching. Consider the example of a patient who is someone who contributes a great deal to the community by way of voluntary service, be it to a local school, coaching a sports team or providing valuable advice to people in times of need. That person is suffering as a result of poor health and requires a surgical procedure to rectify this condition. The priority criteria take into account the ability to work, give care to dependants or live independently. This does not necessarily account for the other work done in the community, and contribution to friends and family life. It has been suggested that the inclusion of these factors brings about the possibility of the allocation of health care becoming a popularity contest. This has already been suggested by Hopkinson (1991) in the case of famous persons, although these claims are unsubstantiated.

So how can health professionals measure direct or indirect benefit to the community of undertaking an elective surgery procedure? Could it be determined by ability, skill base (highly or non-skilled), level of education? This is making a highly contentious decision about what society judges to be desirable qualities and the relevance of these attributes. The boundaries are blurred. If these boundaries are so hard to determine and the judgements so sensitive to decide upon, then should social factors be considered in the process at all? Then one is saying that they have a zero benefit to society.

5.6 Rationing

The more advances medical technology makes, the more health consumers expect in terms of technological treatments and enhanced levels of health care. An ageing world population as a result of the so called "baby boomers" entering their retirement combined with increases in medical technology which increase life and therefore life expectancy, provide policy makers with some difficult allocation decisions. As stated by Blank (1988):

> *Although in the aggregate we are willing to cut costs, when it comes to the individual patient we have been ready to expend all resources without consideration of costs. There is a not-so-implicit assumption that every person has a right to unlimited expenditure on his/her behalf, despite the understanding that in the aggregate this is unfeasible. (p.5.)*

People acknowledge that in theory health care must be rationed, but in practice if it impacts on them, they want the most up to date technology available. Blank (1988) suggests that this attitude stems from the traditional approach of the medical fraternity, to take the "maximalist approach" to health care provision.

Rationing is about prioritising the wishes of society in order of need (Blank 1994), comparing the relative cost of providing health in this case over other areas of government spending including education, public transport, crime, and defence. No one decision will suit every individual in society and the optimal level of health care provision cannot be achieved in most western countries, as each individual has a different utility and different areas of special interest or concern. Government must develop a health policy that combines both the wants and desires of the society it represents with what is possible and sustainable in the long term. This is not always what governments do however, as there is a large political stake to be had during election time, policies at this stage tend to be short sighted, aimed more at gaining votes than looking to the long term. With this in mind Blank (1994) has suggested that because of the drop in public support for the Government prior to the 1993 reforms that *"It sends a clear signal that health policy is an area in which consensus building is critical throughout the policy process." (p.141).*

The public generally resist moves to ration the health care system. This is illustrated by the position taken by some of the country's mayors recently and protest marches about health

care provision in general (Evening Post 12/12/97). If health care was not rationed and operation waiting times were small or non existent the work force could be substantially healthier, therefore increased productivity and economic growth, which could in part compensate for the increase expenditure on health.

The observed demand for health care can vary with supply, if more is provided then more is needed. The providers of health care must determine the most appropriate way to match the marginal benefit from undertaking another elective surgery procedure with the marginal cost of undertaking that procedure. Moral hazard can be a problem. If patients expect that when they get ill they will automatically be provided with elective surgery at no or limited cost to themselves there is less incentive to take care of one's health. Provision of elective surgery may increase the demand for surgery as a result of this moral hazard. If demand increases the allocation of surgical procedures will be less than that demand, which will in turn result in an even greater excess of demand over supply for elective surgery. This may also result in increases in the bill for pharmaceuticals, and other treatments for health conditions.

Roger Douglas asserts that:

> *"Because of the limits imposed on expenditure and resources and the elasticity of demand, there is a great need to make the most efficient use of the resources that are available in order to provide as much health care as possible." (Douglas 1993, p.117)*

He is suggesting therefore that the rationing of health care enables the most efficient use of resources. This point is debatable, as are many in the rationing debate.

There is a large volume of literature on health care rationing. The key point to note is that in most countries health care is rationed to a greater or lesser extent. Price in the health care market is used as a rationing tool, if one does not use prices an alternative approach is required.

5.7 Weightings: Are they arbitrary?

In such a subjective area it is difficult to know whether or not the weightings given to the different areas of clinical and social judgement are most appropriate. Whose judgement should be considered, the general public's, specialists', or patients? Generally the decision makers have not themselves experienced the situation of the patients. If they had been, would this enable them to make appropriate decisions?

The main issue this research wished to address with regard to the weightings is the idea that while these are the new criteria, are they any more or less arbitrary than the figures previously used under the waiting list system? The booking system and associated priority criteria offer a more consistent and transparent way of communicating the decision making criteria to those affected by the system. Consistency and transparency are the key words the government and the various health ministers have been using them to argue their case for the introduction of the booking system to replace the waiting list system (for further details see section Political Environment). It could be argued that this is the key to the success or failure of the new system. If it can be proved that there has been a significant improvement in the allocation of resources through consistent application of the criteria, and through the clarity of the requirements in order to be considered a candidate for elective surgery, then it could be argued that the system is working "better".

5.8 Political Environment

The argument put forward by Mrs Shipley, the former Minister of Health, in favour of the move to a booking system from a waiting list system is that:

> *A booking system gives patients certainty and also an understanding of their health circumstances in relation to others who are also waiting for treatment. It is much fairer, more up front and responsible approach to meeting the health needs of our publicly funded health system.*

Hon Jenny Shipley (8 May 1996, Hansard, p.12395)

Within this statement Mrs Shipley has advocated five main reasons why she believes that the booking system is more appropriate than a queuing system. The key words are certainty, relation to others, fairer, up front and responsible. These words are substantial claims to make about the alternative system, but is she right in suggesting this?

The first point made was in regard to the provision of certainty, but of what? In reality, policy especially in the health sector changes from election to election and in the current political climate there really is no certainty about the future of any health care decisions. Each political party has its own agenda and may well not favour the continued use of the booking system and priority criteria for elective surgery. The Labour Party, in their Health Policy state that "*Under Labour booking systems will be encouraged, so that people can know when their admissions will occur, but they will not be used as a means of hiding the length of waiting lists.*" (p.182). This gives some indication that they intend to keep the booking system, but what the general public and probably the politicians do not know either is if they do keep the booking system what aspects of it will they change? More specifically will the cut off points for elective surgery be changed by any future Governments?

Another aspect to the concept of certainty is that although there may be "certainty" for those patients whose condition fits the priority criteria, there are a number of people who will not be given an operation within six months and are then referred back to their specialist or general practitioner for ongoing assessment. There is no more certainty for those patients than there was prior to the implementation of the booking system and associated priority criteria. As David Tranter of the Coalition for Public Health stated on Kim Hill, National Radio in September 1997 "*It doesn't help that I have a clearer idea (about the time until surgery)...twenty-three different CHEs will come up with twenty-three different criteria*."

The development of the priority criteria was supposed to address the problem of patients in different areas of New Zealand waiting different times for surgery. This is in line with the National Health Committee's aims of consistency and transparency. A few problems arise through this though. The number of surgery procedures available in each region is not consistent throughout the country, and demand might vary. Therefore although the patients may have the same point value, if they live in an area that has either more people waiting for surgery or that has a smaller budget, they may not get the procedure within the same period of time. Another problem is that although the Committee has published priority criteria guidelines it is up to each RHA to design their own based on the Committee's. This could lead, as David Tranter of the Coalition for Public Health says, to twenty-three different CHEs coming up with twenty-three different criteria. That situation would not meet the promise or objective of the Committee of a situation of consistency.

The second concept that Mrs Shipley advocates as a reason for priority criteria is that it will give people certainty of their position in relation to others. This may well be true for those who get onto the booking system, but this is not all the current patients on the present 'waiting list'. In number terms Labour health spokesperson Annette King (Media Release, 23 November 1997) suggests that under the booking system *"What is known is that the tens of thousands of people who are to be knocked off waiting lists are people with health problems serious enough to warrant surgery."* Other estimates put a third of current waiting list patients on the booking system and two thirds will be referred back to their doctors for reassessment in the future. For the one third say, that now have a definite date, there is an element of knowing how long to wait for treatment in relation to others with the same problem on the booking list. There is also a general comparison to be made, but for the other patients who would have been on a waiting list under the old system and are no longer on that list, there appears to be no sense of their situation in relation to others except maybe whether the patient does or does not get onto the waiting list through the criteria provided. So even if patients do know their health circumstances in relation to others, how does this make the booking system a 'better' system? When a patient requires surgery do they necessarily care about other patients around them? The main thrust of public opinion tends to suggest that what patients desire above all else is that they have access to surgery when they need it.

Fair, defined in the Oxford Dictionary is "*Just, unbiased, equitable; in accordance with the rules*."(p.484.). How is it fairer? Fair to whom, those who get onto the booking system? How fair is it to those who miss out? Some are on waiting lists because some medical practitioners referred patients earlier, placing many before they were ready for surgery. Under the booking system it is planned that only those requiring surgery within six months will be placed on these waiting lists, which will enable a more accurate way of measuring the efficiency of the health system. This may be fairer.

While it has been suggested that the waiting lists may inflate the true number of people waiting for surgery, it has been suggested by others that the new system may, in fact, underestimate. Others such as the Labour Party in their 1996 Health Policy, have suggested that the new system is just changing the numbers to suit the political environment. There is still the same number of people overall that need surgery and yet published figures will only show those who will get surgery within the next six months. Is this doctoring the figures or is it a move to a more efficient, fairer health care system?

The reference by Mrs Shipley to the new system being 'up-front' is quite similar to the suggestion that it gives patients a better idea of their situation in relation to others. The National Health Committee uses the word transparency to describe the same concept. Transparency enables every person to know the reasons why they do or do not get access to surgery by looking at the points that are given in relation to each section of the priority criteria assessment sheet. The idea is also to enable the comparison of case mix and severity, instead of clinicians comparing one patient to another without any explicit criteria. Clinicians are able to compare the points allocated to each patient, remembering that the priority criteria allow for the inclusion of social factors as well as clinical factors.

The last assertion 'responsible' is a difficult concept to define. The main question is responsible to whom. There are many players in the health system, and probably winners and losers. Defined in the Oxford Dictionary as *"Liable to be called to account (to a person or for a thing). Morally accountable for one's actions; capable of rational conduct ... (of a ruler or government) not autocratic.*" (p.1173), responsible as illustrated can mean a number of things, in this situation possibly Mrs Shipley is meaning a combination of the first two. The question at the end of the day is what is to say that the new system is any more responsible than the system previously in place? One aspect is that people can challenge the points awarded to them in the assessment of their priority for surgery.

Ruth Richardson speaks of health policy as being "*... the most technically complex and politically difficult area, with the greatest potential for backsliding*." (Richardson 1995, p.147.) The initial idea of the health care reforms undertaken in 1992 was for CHEs to be set up in a similar way to the State Owned Enterprises "in order to maximise efficiency gains" (p.147). It is at this stage that one can see where the conflicts of interest between the public and the politicians may arise. Does the public see the advantages to society of maximising efficiency in the health care system if it means that, as a result, someone they know misses out on the health care when they believe they should have been treated? The measurement of efficiency is difficult as efficiency means different things to different users of the health system. In the case of the National Health Committee, efficiency refers to the number of operations conducted for a given cost, which is substantially different to the above argument from a patient's perspective.

The successor to Mrs Shipley as the Minister of Health, Bill English, has continued to use the key words certainty, fair and consistent in media releases examples of which are given below. This would suggest that for now the direction of National health policy remains committed to the idea of the booking system.

> "*The booking system is the first step to providing more honesty and certainty to people waiting for non-urgent surgery" (Hon Bill English, Media Release, 7 October 1997)*
> *"The only fair and consistent way to do it is to have a system which gives people some certainty about when they are going to been seen." (Media Release, 2 October 1997)*

The political climate is reflected by statements from Annette King, the Labour Health spokesperson, that suggest 100,000 patients are on waiting lists, this leads back to the initial suggestion that waiting lists as such are not an accurate measure of the true numbers waiting for surgery, either understating or overstating the figure and yet this figure is used by the opposition parties as ammunition in the debate over health policy.

6. CONCLUSION

As is evident from the previous discussion, the topic of priority criteria for elective surgery is part of a much wider issue. The New Zealand Labour Party will tell you that one of the reasons is because of under-funding:

> *"Under current health policy, financially starved public hospitals cannot afford to provide elective operations, even to people who meet already exacting clinical criteria"*
> Press Release: New Zealand Labour Party, 25/11/97 Health Spokesperson, Annette King

The National Government will say that it is because of the increase in medical technology and pharmaceutical developments, combined with the fact that the system of measuring the number of patients waiting for surgery is inaccurate. Whatever the real reason, the National Advisory Committee on Core Health and Disability Support Services has recommended that in order to try to bring transparency and consistency to the system already in place, the

Health Funding Authority, embark on a new system of prioritising patients in need of elective surgery. This new system, as discussed, involves the use of a priority criteria, developed using public and medical consultation, with which the authorities develop a booking system to ration the elective surgery procedures.

There are no easy answers to any of the questions raised with regard to the health care system, however this research intended to put forward some ideas and debates from both sides of the spectrum in order for some of the claims to be subjected to some closer scrutiny. While previous and current Health Ministers Jenny Shipley and Bill English claim that the system gives more certainty, is fairer, more responsible, up front, honest and consistent, what evidence is there to support these claims?

The influence that politics has on the decisions made about the health care system should not be underestimated. New Zealand's three year political cycle plays a large part in the way health care policy is decided upon. It is because of this political influence that economic evaluation may have a role to play in providing the decision makers with some comparable data. Even if the data are not always accurate and although some methods may not be to the liking of the public, it is a starting point for consistency of decisions and provision of some method to move forward from.

Whether the general public likes it or not the use of dollar values on lives is possibly the easiest and most cost effective way of comparing the relative merits of decisions. Health care is not the only area where dollar value is used. Airlines put a value of $2.15 million on a passengers life[2], and Transit New Zealand also use dollar figures in order to undertake cost benefit analysis for roading decisions. Until there is a "better" way to compare alternative courses of action, maybe the New Zealand public should continue to use a system that incorporates economic evaluation. Obviously as is illustrated by the discussion in the previous chapters there are flaws in the system. Primarily these are the assumption that each individual is the same and has the same utility, the fact that the priority criteria do not allow for the relative benefits of other procedures to be determined but concentrates on the relative merits of one procedure or on the treatments available for the patient's complaint. It should be noted that patients although not able to choose the treatment they desire, have the option to

[2] Quaintance, L. (1997, November). Plane Truths. *North and South*, pp.68-79.

opt out of the procedure even after meeting the criteria for surgery. The tendency for many policy decisions to be made within a short term framework, reflecting the reliance of the country on the three year political cycle, an unsatisfactory measurement of the intangible benefits (or costs) that occur as a result of the economic evaluation, the use of rationing that is generally accepted as being necessary although people wish it did not apply to them (Blank, 1988), and the arbitrary nature of the weightings assigned to the different aspects of the implications to patients of living without the surgery, all of which is hampered (or helped) by the political environment within which much of the decision making takes place. This affects the choices available to patients within the system through the elements of uncertainty and lack of vision which enable the patients to be rational consumers.

There are so many factors to consider when comparing the previous waiting list system with the move to booking times. It is probably too early in the implementation of this procedure to enable a clear judgement about the system, as all too often, theory looks good on paper until it is put into practice within a large organisation with many different opinions, ways of undertaking procedures and very importantly once the human face is put on health care. At the end of the day maybe economics can add value to an issue that is at times a very emotive one as evidenced by the media coverage of so called deficiencies in the health system.

Much of the public's perception of the proposed changes to the health care system are shaped by personal experience of the health care system or experience of the health care system as illustrated by the media. The release of figures by the Labour Party that indicate 100,000 people are on waiting lists for elective surgery (Press Release 23/11/97) is an example of the type of often misleading information that I hope this research can remind us to challenge in our own minds. It is important to bear in mind the lack of accurate data and methods of data measurement that have been admitted to by the relevant information gatherers and users of the information. The key contribution that is needed in the debate is that of a system or method that enables the collection of accurate and timely data. It is this data that will provide decision makers with the information to make the most efficient use of the resources available with the health system.

APPENDICES

APPENDIX 1: Definitions

Priority Criteria - a standardised set of criteria used to assess the extent of benefit expected from elective surgical procedures, incorporating both clinical and social factors, which help to develop a list of elective surgery recipients in order of priority to surgery.

Elective Surgery - a routine operation for which there is a certain amount of discretion in terms of both when and whether the operation is carried out. Not generally aimed at increasing life expectancy but life quality, not immediately life threatening.

RHA - Regional Health Authority – the purchasers of health care from the public private or voluntary providers of that health care. Split into four appointed RHAs namely Northern Region, Midland Region, Central Region and Southern Region. Acts as an agent for consumers to seek quality value for money and innovation in health care delivery.

CHE - Crown Health Enterprise – includes typically a single metropolitan hospital or group of hospitals and related services. Compete with one another for bulk funded services.

APPENDIX 2: Priority Criteria Developed

- Cholecystectomy (Gall Bladder Surgery)

SCORING SYSTEM

Cholecystectomy (Gall Bladder Surgery)

Priority Criteria for Elective Cholecystectomy[1]

Frequency of Biliary Type Pain	
3 or more attacks/past month	15
1-2 attacks/past month	10
3 or more attacks/past year	5
1-2 attacks/past year	2

Average Severity of Biliary Type Pain	
Severe	15
Mild - Moderate	5

Note : 'Severe' means that intramuscular narcotics are required. 'Mild - Moderate' means that oral agents are sufficient to alleviate pain

Average Severity of Biliary Type Pain	
> 6 hours	15
1-6 hours	10
< 1 hour	5

Disturbance in Patient's Life Due to Symptoms	
Major disturbance	20
Minor disturbance	10
None	0

History of Acute Cholecystitis (single episode)	
Yes	15
No	0

Presence of Diabetes	
Yes	5
No	0

Past History of common Bile Duct Stone	
Without subsequent demonstration of duct clearance (eg, Jaundice, cholangitis, gallstone, pancreatitis).	15
With subsequent demonstration of duct clearance.	5

Note : Clinical evidence of current common bile duct stone warrants immediate intervention and these criteria do not apply.

Likely Waiting Time:		Reasonable Waiting Time:	

Patient Urgency:	Urgent		Semi-urgent		Routine	

Comments: .....

.....

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[1] *Note : Urgent or semi-urgent cholecystectomy is indicated for most patients with:*
- *Gallstone pancreatitis*
- *Second or subsequent episode of acute cholecystitis*
- *Adenocarcinoma of gallbladder*
- *This form is not intended for these very high priority situations*

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- Otitis Media with Effusion

SCORING SYSTEM

Otitis Media with Effusion (OME) or Recurrent Acute Otitis Media

Patient ID:

Name of Assessor:	
Date of Assessment:	
Total Score *(see notes)*:	

Age at Time of Initial Effusion	
< 3 years	30
3 -4 years	10
≥ 5 years	0
Score	

Number of Times Ruptured	
0	0
1	15
≥ 2	35
Score	

Total Time with Effusion (consecutive or intermittent)	
< 6 months	0
7 months	5
8 months	10
9 months	15
10 months	20
11 months	25
12 months	30
> 12 months	35
Score	

Number of Attacks	
1	5
2	15
≥ 3	30
Score	

Evidence of Normal Hearing	
Yes	0
No	20
Score	

Note : Includes may only be determined by pure tone audiometry.

Social and Development Factors of Concerns	
Non	0
Mild - Moderate	10
Severe	15
Score (0-15)	

Note : Includes problems with learning, behaviour, development, home-learning environment, relationships.

Note : High priority patient score 100 automatically.

- Prostatectomy

SCORING SYSTEM

Prostatectomy

Patient ID : .. ..

	INTERNATIONAL PROSTATE SYMPTOM SCORE (I-PSS)					
	Not at all	Less than 1 time in 5	Less than ½ the time	About ½ the time	More than ½ the time	Almost always
1. Over the past month, how often have you had a sensation of not emptying your bladder completely after you finished urinating?	0	1	2	3	4	5
2. Over the past month, how often have you had to urinate again less than two hours after you finished urinating?	0	1	2	3	4	5
3. Over the past month, how often have you found you stopped and started again several times when you urinated?	0	1	2	3	4	5
4. Over the past month, how often have you found it difficult to postpone urination?	0	1	2	3	4	5
5. Over the past month, how often have you had a weak urinary stream?	0	1	2	3	4	5
6. Over the past month, how often have you had to push or strain to begin urination?	0	1	2	3	4	5
	None	1 time	2 times	4 times	4 times	5 or more
7. Over the past month, how many times did you most typically get up to urinate from the time you went to bed at night until the time you got up in the morning?	0	1	2	3	4	5

	QUALITY OF LIFE DUE TO URINARY SYMPTOMS						
	Delighted	Pleased	Mostly Satisfied	Mixed	Mostly Dissatisfied	Unhappy	Terrible
If you were to spend the rest of your life with your urinary condition just the way it is now, how would you feel about that?	0	1	2	3	4	5	6

Urine Flow Rate

< 10 ml/sec	10-15 ml/sec	> 15 ml/sec

Post Void Residual

< 300 ml	> 300ml

Urodynamics (Optional)

< 60cm H_2O	60-80 cm H_2O	80-100 cm H_2O	100 cm H_2O

- Prostatectomy: page 2

Overall Clinical Impression

0	1	2	3	4	5	6	7	8	9	10

Least Urgent
Least Expected Benefit

Most Urgent*
Greatest Expected Benefit

** Of patients without complications*

Likely Waiting Time	
Reasonable Waiting Time	

Patient Urgency	Urgent		Semi-Urgent		Routine	

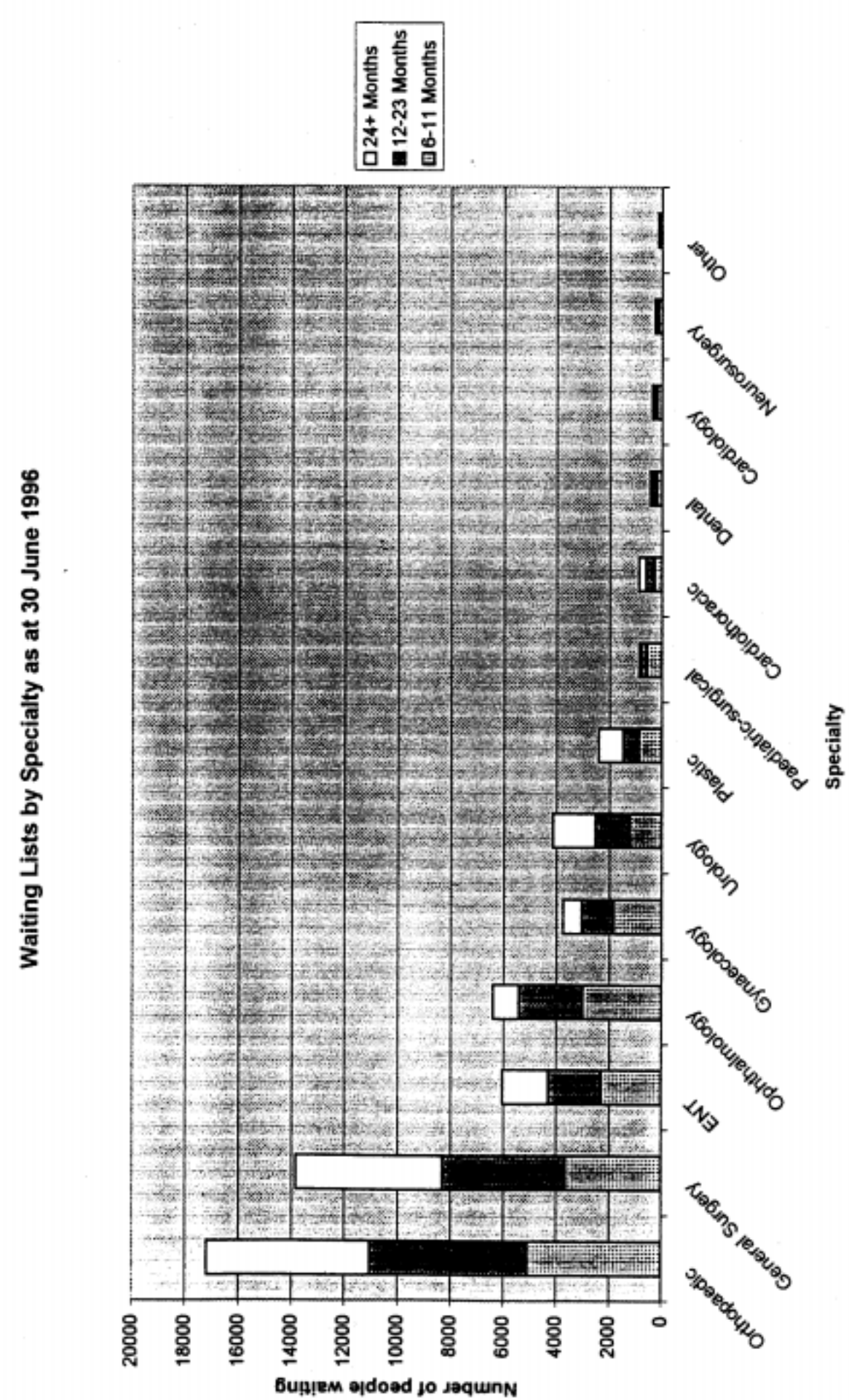
Comments:

APPENDIX 3: Surgical Waiting Lists and Surgical Throughput

Crown Health Enterprise	Waiting Lists as at 30/06/93	30/06/94	30/06/95	30/06/96	Raw Surgical Throughput 1995/96	%change from 1994/95
Northland Health	3449	3056	3279	3852	6550	-5.1
Waitemata Health	1064	1247	726	1035	4229	-2.5
Auckland	6471	7234	8868	10767	23622	9
Sth Auckland	5625	5970	6679	7849	13480	-3.2
Northern Region Providers	16609	17507	19552	23503	47881	
Health Waikato	6897	6828	7891	8513	15843	-1.6
Eastbay Health	964	1233	1097	1164	2239	-8.9
Lakeland Health	1777	2150	2482	1866	3974	-4.6
Western Bay Health	3211	3039	4485	4716	7048	12.3
Tairawhiti Health	1481	1757	2215	2097	2143	-3.4
Taranaki Healthcare	2265	2597	2564	3136	5015	-4.1
Midland Region Providers	16595	17604	20734	21492	36262	
Healthcare Hawkes Bay	3904	4662	5716	5392	6268	3.2
MidCentral Health	3628	3975	3836	4298	6437	-6.1
Good Health Wanganui	1201	1619	1856	2248	3154	-5.2
Capital Coast Health	4880	5025	6205	6289	10921	-0.3
Hutt Valley Health	1888	1770	1979	2110	4881	-1.2
Wairarapa Health	723	564	848	983	1248	-19.3
Nelson-Marlborough	2693	3070	3545	3801	5139	-6.3
Central Region Providers	18917	20685	23985	25121	38048	
Coast Health Care	378	504	575	669	1706	-3.1
Canterbury Health	8225	8729	8050	9567	11465	-2.7
Healthlink South	838	990	671	1146	3897	1.1
Health South Canterbury	1520	2396	2615	3146	2669	-13.8
Healthcare Otago	4373	5263	5106	5110	10998	-4.3
Southern Health	3536	3880	4013	4023	4337	1.1
Southern Regional Providers	18870	21762	21030	23661	35072	
New Zealand	70991	77558	85301	93777	157263	

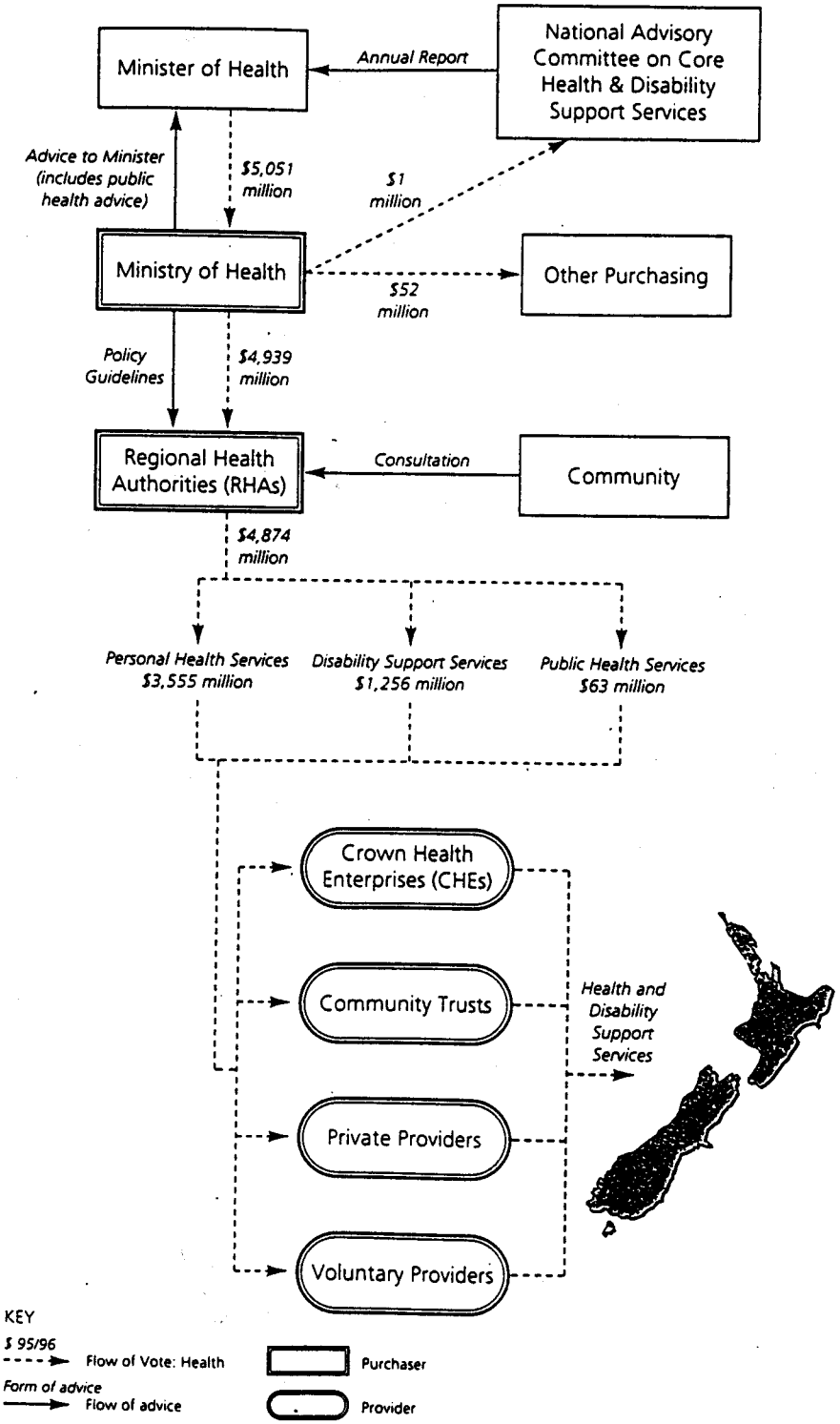
Source: NMDS public hospital data in Purchasing Your Health:1995/96.

Waiting Lists by Speciality



APPENDIX 4: Structure after the 1992 Reforms

FUNDING ALLOCATED TO VOTE:HEALTH 1995/96



Source: Performance Monitoring and Review Section, Ministry of Health

REFERENCES

Agnew, T.M.(1994, June). "Waiting Lists for Coronary Artery Surgery: Can They be Better Organised?" *New Zealand Medical Journal* 107(979) 211-215.

Blank, R.H.(1994). *New Zealand Health Policy: A Comparative Study*. Auckland: Oxford University Press.

Blank, R.H. (1988). *Rationing Medicine*. New York: Columbia University Press.

Borren, P & Maynard, A.(1994). "The Market Reform of the New Zealand Health Care System: Searching for the Holy Grail in the Antipodes". *Health Policy, 27,* p 233-252.

Coast, J. (1993). "The Role of Economic Evaluation in Setting Priorities for Elective Surgery". *Health Policy, 24*, pp 243-257.

Cullis, J.G. & Jones, P.R. (1996, March). "Rationing by Waiting Lists: An Implication" *The American Economic Review, 76* (1), 250-257.

Douglas, R. (1993). *Unfinished Business*. Auckland. Random House New Zealand Ltd.

Fraser, G., Alley, P. & Morris, R. (1993, July). *Waiting Lists and Waiting Times: Their Nature and Management*. Wellington : National Advisory Committee on Core Health and Disability Support Services.

Gray, A. & Bickley, J.(1992, March). *Changing the Health System : A Guide to Some of the Issues and Arguments.* Wellington : Coalition for Public Health.

Hadorn, D.C & Holmes, A.C. (1997(a), January 11). "The New Zealand Priority Criteria Project.Part 1:Overview". *British Medical Journal,314*(7074),

Hadorn, D.C & Holmes, A.C. (1997(b), January 11). "The New Zealand Priority Criteria Project.Part 2:Coronary Artery Bypass Graft Surgery". *British Medical Journal, 314* (7074),135-8.

Hansen, P. (1995, May). "The Management of Waiting Lists: An Exercise in Social Choice". *Economics Discussion Paper No. 9509*. Otago University: New Zealand.

Honigsbaum, F., Calltorp, J., Ham, C. & Holmstrom, S.(1995). *Priority Setting Process for Healthcare*. Great Britain : Radcliffe Medical Press.

Hopkinson, G. (1991, 16 May). "Joining the Queue or Jumping It?". *The Examiner*, p.14.

Lindsay, C.M & Feigenbaum, B. (1984, June)."Rationing by Waiting Lists". *The American Economic Review. 74* (3), 404 - 417.

McGuire, A., Henderson, J. & Mooney, G.(1988). *The Economics of Health Care: An Introductory Text*. London: Routledge & Kegan Paul.

Midland Health. (1997, February). *Waiting Time Criteria: Priority Access Criteria.*

Ministry of Health (1997)."Medical and Surgical Services". In *Purchasing for your Health 1995/96:A Performance Report on the Third Year of Regional Health Authorities.* Performance Management Unit : Ministry of Health.

National Advisory Committee on Core Health and Disability Support Services (1992). *The Best of Health: Deciding on the Health Services We Value Most.* Wellington, New Zealand.

National Advisory Committee on Core Health and Disability Support Services (1993). *Core Services for 1994/95: Second Report*. Wellington : National Advisory Committee on Core Health and Disability Support Services.

National Advisory Committee on Core Health and Disability Support Services *Fourth Annual Report.* (1995, September). Wellington: National Advisory Committee on Core Health and Disability Support Services.

National Advisory Committee on Core Health and Disability Support Services (1996). *Core Services for 1995/96:Fifth Report.* Wellington : National Advisory Committee on Core Health and Disability Support Services.

OECD. Chapter 16 - New Zealand in *The Reform of Health Care Systems: A Review of Seventeen OECD Countries. Organisation for Economic Co-operation and Development.*

Richardson, R. (1995). *Making a Difference*. Christchurch. Shoal Bay Press.

Ross, J. (1995). "The Use of Economic Evaluation in Health Care: Australian Decision Maker's Perceptions". *Health Policy, 31*, pp103-110.

Rutten, F. (1996). "Economic Evaluation and Health Care Decision Making". *Health Policy, 36*, pp215-229.

Shipley, J. (1996). Health Services 1996: *Facts on the Purchasing and Provision of Health and Disability Support Services for New Zealanders*. Ministry of Health.

Strosberg, M.A., Wiener, J.M, Baker, R. and Fein, I.A. (Eds).(1992).*Rationing America's Medical Care: The Oregon Plan and Beyond.* Washington.D.C : The Brookings Institute.

Triggs, S., Johnston, G., O'Connor, P., and Wong, R. (1995). *Patients in Profile: The Use of Health Care Services in New Zealand.* Research and Analytical Services: Ministry of Health.

Yates, J. (1987).*Why Are We Waiting?: An Analysis of Hospital Waiting Lists*. Oxford : Oxford University Press.

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ISSN. 1174-5193

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STUDENT PAPER NO. 2

DEBORAH JENKINS and STUART BIRKS

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1998