

**HOW COSTING AND FUNDING SYSTEMS CREATE INSTITUTIONAL  
TENSIONS BETWEEN MANAGEMENT AND MEDICAL PERSONNEL IN  
THE PUBLIC HEALTH CARE SECTOR**

BY

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Between Management and Medical Personnel in The Public Health  
Care Sector.**

## **Abstract**

This research examines the conflicting relationship between management and medical personnel in the New Zealand Public Health Sector with regard to costing and funding systems. Due to the lack of research into small DHBs, this research focuses on small hospitals as they face unique circumstances not experienced by larger hospitals, to discover potential areas where costing and funding systems cause conflict, the reasons for this conflict and to provide possible solutions to prevent or mitigate this conflict. The method employed is a qualitative exploratory case study of one DHB utilizing a two phased semi-structured interview approach. A total of 10 interviews were conducted and analysed.

Three main areas from which conflict arises were identified: the costing system within the case hospital, the Population-based funding system and Inter-district flows. Each area is investigated from the perspectives of management and medical staff, using Institutional Theory and the concept of legitimacy. The institutional theory lens is used to identify and separate the interviewees into three groups based on their competing institutions. Each group's answers were then compared to find reasons as to why there was conflict.

Three core reasons for the conflict were identified: ineffective communication, lack of trust in management and the costing and funding systems themselves. Much of the tension is because of misconceptions, limited knowledge and poor communication leading medical personnel to feel that management does not respect their opinions and management to believe that medical personnel are unwilling to cooperate with them. This research also determined that the institution of management that focuses on costs and economic use of resources and the institution of medical personnel which is patient focused, are necessary to the operation of a public hospital. Though it can be a difficult to balance, the ideal situation would be for these institutions to work in harmony and perhaps eventually merge. Suggestions are given for reducing internal conflict between management and medical personnel and it is hoped this research offers a starting point for future research into improving both the costing and funding systems and the internal relationships between management and medical staff.

Key words: Public health sector, costing systems, tension and conflict, Population-based funding and inter-district flows, institutional theory.

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# Chapter 1: Introduction

## 1.1 Background

As well as facing an increasingly ageing population, the New Zealand Public Health sector is under ever-increasing political, economic and social pressure. However there are limited resources and thus there is a need to lower costs and increase efficiency. Costing information is integral to not only performance evaluation for the different District Health Boards (DHBs) but also to determine the funding that these DHB's are provided with in order to carry out necessary health services and to set the prices linked with DHB Inter-District Flows.

Due to these external political, economic and social pressures, DHB management<sup>1</sup> must, from necessity, place a great importance on costing. Costing systems are designed to reflect the norms and values that management prescribe to, where keeping costs down and providing the best care for dollar value is the key focus. However medical staff have different norms and values where their focus is on providing the best possible treatment for their patients and on finding ways to make both their patients and their own lives easier. Having a healthy and less frustrating work environment will be beneficial for both clinicians and patients.

Although both sets of norms and values (or institutions) have the same end goal; that of providing the best possible health care to their communities, their means of attaining that goal are often different. With a costing system that imposes an institution of cost cutting onto medical personnel, conflict is bound to result between the two sets of norms and values, (hereafter referred to as institutions<sup>2</sup>). Perceiving that a system that does not conform to their

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<sup>1</sup> For the purposes of this study a medical personnel is anyone who participates in the treatment of patients. Management are non-medical personnel who have decision making responsibilities.

<sup>2</sup> This is discussed further in Chapter 3.

taken for granted values and norms can lead medical staff to resist the changes, doubt the legitimacy of the costing system and come into conflict with management (Scott, 2001).

The hospital this case study was conducted in is also at an important point in time. The hospital is a part of a very small and rural DHB. Up until 2015 it had been integrated together with two much larger DHBs. Their original management and institutional structures were dismantled and management staff were either laid off or moved to work within a centralised management structure located in the vicinity of one of the larger original DHBs. Though unintended, this effectively cut-off medical personnel from any management that could make a decision. For various reasons, the DHB administration with any decision making power rarely travelled to the case DHB. Therefore medical staff at the DHB were left without any way to have their opinions and perspectives heard or obtain explanations about how decisions were being made. Nor were they able to get results when decisions requiring authorisation needed to be made quickly.

This may have led to a resistance to management and unwillingness by the medical staff to cooperate with management. Not only that, but since the DHBs were split, there has been a regular turnover of management staff who only stay long enough to implement new policy but not long enough to ensure the effectiveness of such policy. Now that the hospital has its own CEO again and medical personnel have access to management, it is important that management and medical personnel do not come into conflict. To this end the motivation of this research is to find out potential areas where costing and funding systems cause conflict, the reasons for this conflict and to provide possible solutions to prevent or mitigate this conflict.

## 1.2 Motivation

“Accounting systems do more than just monitor or mirror reality; they also shape reality” (Morgan, 1998). This study explores how an accounting systems that turns a department or patients into cost centres can make the medical staff into an extension of that system. Patient staff relations can change as a result, as decisions previously dominated by considerations of health care can be intruded upon by cost controls such as “staying within a budget” (Morgan, 1998). Morgan clearly illustrates how costing systems and the institutions/behaviours that they appear to promote can effect decisions and have the potential to influence behaviour and culture within a hospital.

As explained above in section 1.1, health care sustainability and cost reduction are a major issue so some measure of reality shaping is needed, but the question is, is the reality that the current costing system is creating, the best or even a suitable reality. How is this reality affecting medical staff and patients? Is it really the most efficient way?

Previous literature, and personal observation, strongly suggest a clear division between medical and accounting personnel perceptions (Ross, 2004). This divide arises from both medical personnel’s un-informed views of the costing and funding systems, and, the accounting personnel’s lack of understanding regarding the ‘ground zero’ needs of medical personnel for the day-to-day provision of health care.

There is also a clear distinction between the institutions (beliefs and norms) held by management that are cost focused and that of clinicians which are patient focused. The issue of opportunity costs also arises. For example, in the case hospital there is no planned obsolescence programme for equipment so if the CT scanner breaks down regularly but equipment is only replaced when the situation becomes critical, there is no guarantee that the necessary funds will be available to remedy the problem. This has an effect on patient treatment and wait time as well as creating extreme frustration for medical staff.

There is also no redundancy built into the staffing system so if a staff member becomes sick or for some other reason cannot get into the hospital, then health services have to be cancelled as well as the remaining staff members having to shoulder bigger workloads. One senior staff member suggests that up and coming new doctors are no longer prepared to work in these conditions which means that finding new medical staff will become increasingly difficult. The case hospital is currently experiencing a bed crisis where theatre lists, among other health care treatments, are being cancelled due to lack of beds to put the patients. This situation creates much dissatisfaction for clinicians (in the core study) who need to turn away patients who have sometimes waited months for their appointed surgeries, especially when clinicians can see available beds in the private hospital that is closely associated with the case DHB.

A New Zealand Herald article (April 2016) reported that there were 170 000 people who need surgery that are not even on the waiting list and that the average waiting list wait time is 224 days. A senior staff member at the case hospital further reported that for something that is life improving, though not lifesaving, such as a hip replacement, the patient needs to be virtually crippled before they can even be considered. This means that otherwise healthy patients that could stay in the workforce with a simple operation sometimes have to suffer pain and redundancy for years before they are critical enough to get on the waiting list. These issues have some link to the costing and funding systems utilised in the New Zealand public Health Sector. The opportunity costs lost here due to the current costing systems and funding models include;

- Medical personnel dissatisfaction in the work place and possible consequential lowering of work performance. No patient wants a depressed doctor taking care of them.
- The cessation and continual interruption of the provision of health services due to a lack of staff or non-functioning equipment.
- The potential future problems of enticing young and up and coming doctors to enter the New Zealand Public Health Sector leading to concerns about future sustainability.

- The neglect of otherwise healthy patients with the capacity to re-enter or stay in the work force and contribute to the economy.

The above discussion indicates that there is dissatisfaction found within the medical personnel for the current Public Health situation. However it is unclear as to how much of this dissatisfaction and ineffectiveness can be attributed to institution-conflict deriving from the DHB's costing and funding systems. Small hospitals are comparatively more costly to maintain than larger hospitals which means that resources are used less effectively in small hospitals. Small hospitals also have unique problems that larger hospitals do not face. Because it is imperative that there be strong cooperation between management and medical personnel in order to ensure the best possible use of resources and the ability to successfully overcome unique challenges. Many of the issues previously raised such as lack of beds, no redundancy for equipment and lack of cover for sick staff are problems that are far more likely to be found in small hospitals. Such issues can only be remedied successfully with the full cooperation of both groups. Without cooperation, far from cutting costs and using resources more efficiently, costs may actually rise further.

The main motivation for this research is therefore that should this apparent division between the medical and management personnel go unaddressed, as argued by previous literature, it could create a culture of resistance that negatively impacts management and medical personnel, their patients, the delivery of health care and society in general (Drury & Tayles, 1995). The tension that results is because institutional conflict can lead to lack of legitimacy for the costing and funding systems as well as dissatisfaction with management decisions from clinicians and frustration with medical staff who push back against management. Push back from staff and tension prevents the costing and funding systems from successfully being implemented even if it is in principle a successful and efficient costing or funding system.

The singular function of any hospital is to provide quality health care and it is vital that the accounting systems (e.g. costing systems and funding models) work in synchrony with, and provides support for, health care givers. Therefore, it is vital for the opinions and views of

these medical personnel to align with the opinions and views of the accounting personnel because without this alignment there will be no cooperation and there will be a lack of legitimacy. For this alignment to occur it is vital that the views of medical personnel and management be explored, heard, understood and incorporated into DHB accounting system plans and procedures. In order for all personnel to be working in the same direction, information flow and communication have to be achieved. It is hoped that by discovering why such conflict of institutions and resistance is occurring in the three areas of the costing system, Population-Based Funding (PBF) and Inter-District Flows (IDF), that steps can be taken to find possible solutions to reduce and even eliminate conflict, thereby, ensuring an effective and efficient use of resources.

### **1.3 Research Objective**

The scope of this research is focused on investigating three primary areas, that of the costing system within the case hospital, that of the PBF system and its effects on the hospital and that of the pricing of IDFs and effects of the IDF system on the hospital. Each of these three areas is investigated from the perspectives of both management and medical staff in order to provide answers for the following three research questions.

1. What are the different perceptions medical and management personnel have of the current costing system and how do tensions arise from these differences?
2. What are the different perceptions medical and management personnel have of the PBF system, and how do tensions arise from these differences?
3. What are the different perceptions medical and management personnel have of the IDF system and how do the tensions arise from these differences?

If these questions can be answered then management and medical staff will have some idea about how better facilitate cooperation and communication to reduce tension between the

institutions of the two groups, which are essential for the efficient use resources in a constrained resource environment. This is of particular importance to small hospitals, as small hospitals find it more difficult to be cost efficient than large hospitals.

## 1.4 Theory

The theory that will be used to analyse the reasons for any tension discovered in the DHB is Institutional theory and legitimacy. The underlying norms and values within which management and clinicians operate are not the same and opinion in the academic world is that two institutions within an organisation will compete and cause conflict within the organisation (see chapter 3). This research is also particularly concerned with legitimacy. *'Legitimacy is a theory that explicitly considers organisations as part of the broader social system and it seeks to describe or explain behaviour rather than prescribe how organisations should behave.'* (van Kesteren, 2014, p.39).

Institutional theory suggests that an organisations survival depends on conforming to the expected norms of society (Covaleski & Dirsmith, 1988). The hospital derives its power to continue operations from the government while the government derives its power to continue from society. The Public Health Care system is an area where these powers collide to a certain extent. Society expects an increasing level of quality health care from its hospitals while government expects hospitals to continue to operate and satisfy societal expectations within the limited resources provided. Both management and medical personnel represent links between societal and government expectations with medical personnel more in line with societal expectations and management personnel more in line with governmental expectations. In order to meet all expectations, medical and management personnel need to communicate and cooperate. In order to achieve that, it is important that both perceive the costing system and funding model as legitimate, i.e. conforming to their institutional norms and values.

Competing institutions lead clinicians to question the legitimacy of the costing system and funding models which in turn can lead them to perceive management decisions as lacking legitimacy. This can result in a push back against the systems and management who implement them. In the same way, management may see clinicians' opinions and decisions as lacking legitimacy and once again this causes tensions. Investigating the conflict and tensions between the management and medical staff, through the lens of institutional theory, will provide potential explanations for these tensions and lead to possible solutions.

## **1.5 Method**

The method used to gather results is a qualitative, exploratory case study utilizing a two phased semi-structured interview approach. The first set of interviews with medical staff was designed to determine the existence of tensions between management and medical staff as well as pinpoint some areas where this tension is arising from. Once the existence of tension is determined, the clinician's answers are analysed to determine what areas of costing and funding systems these tensions are originating from. A second set of interviews, containing more specific questions target toward the problem areas discovered in the first round of interviews, was then conducted. Those interviewed in the second round interviewees were both clinicians and accounting and management personnel. In total, 10 interviews were conducted, recorded and transcribed. Data was analysed using reflection theory at each stage of the research (as discussed in chapter 4) and transcripts are repeatedly read and different coloured highlighters are used to identify common and opposing patterns to the answers. Having the same questions answered by both groups, who have differing perspectives and institutional norms and values, allowed for the answers to be examined through the lens of institutional theory. Areas where differing perspectives created tensions were identified and the specific reasons for these tensions examined. From there, solutions can be sought and new areas of further research can be discovered.



## 1.6 Outline of this Thesis

Chapter two of this thesis can be broken down into three main areas. Firstly it discusses the PBF model (PBF), first comparing the New Zealand PBF system to other PBF systems, and then outlining the current New Zealand PBF system and its strengths and weaknesses. Secondly, chapter two compares traditional and ABC costing methods as well as the merits of increasing levels of sophistication levels in the costing system. It also discusses potential measurements of costing system sophistication and how they may be applied to the sophistication levels of costing systems in the public health sector. Finally chapter two outlines the New Zealand Inter-District Flow (IDF) system and its relations to transfer pricing.

Chapter three discusses institutional theory and legitimacy, and shows how current institutional theory can be applied in the context of the public health sector. Chapter four lays out the method used. Chapters five, six, seven and eight discuss the results attained from the interview process and compare the different perspectives of each distinct group of interviewees identified on the three main topics of PBF, IDF and the costing system of the case hospital. Chapter five reports the results of the first phase interviews with clinicians at the DHB. The results form the basis of the second phase of the study. Chapter six discusses the views of the management group, chapter seven presents the perceptions of the hybrid management-medical group, whilst chapter eight concentrates on the opinions of the medical group. Finally chapter nine is a discussion on the results and main tensions inducing problems contributing to conflict between management and medical staff within the three areas of PBF, IDF and the costing system. It also discusses limitations of the research, new areas of potential research and possible solutions that can be implemented now or that could be implemented after further research. Lastly this presents a conclusion to this research.



## **Chapter 2: Funding and Costing in the New Zealand Public Health Sector**

### **2.1 Introduction**

This chapter will give an overview of Population Based Funding (PBF) in New Zealand with a brief comparison between the New Zealand PBF system and systems from other countries. It will also highlight some of the problems that can be found within the NZ PBF system. This chapter will also give a brief overview of Inter-District Flows and Transfer pricing in the New Zealand public health system as well as discuss costing system sophistication. This chapter will enable some understanding of the context that small DHBs must function in.

### **2.2 Population Based Funding in the New Zealand Public Health Sector**

This section will make comparisons between the New Zealand PBF system and how it works compared to a few other countries. It will then give an overview of how the PBF system works in NZ and finally it will highlight areas of weakness in the NZ PBF system.

#### **2.2.1 Crown Funding**

Crown funding contributes more than two thirds of total spending on New Zealand's public health care. According to the Financial Statements of the Government of New Zealand for the Year Ended 30 June 2017. This equates to roughly 16.2 billion dollars distributed over the 20 District Health Boards and other health related areas. The funding is distributed by the Ministry of Health to all DHBs in accordance with the Crown Funding Agreement. This is an agreement between the Ministry of Health and New Zealand's DHB's which specifies that the Crown will provide funding to the DHB's in return for specified service provision. Due to the significance of the amounts involved, DHB's are required to provide provisional and planning documentation in order to receive their annual funding from the crown. This includes both

financial and non-financial documentation as laid out in section D1.1 of the Crown Funding agreement. This also includes a Statement of Intent and a Regional Plan. These plans should address the health care needs from a local to national level, the best co-ordination of services to meet these health needs and show how health care services can be most optimally delivered to meet these needs (van Kesteren et al., 2016).

Due to the significant amounts of funding involved, the annual funding awarded to each DHB through crown funding is methodically worked out through the process of PBF.

### **2.2.2 A Comparison of New Zealand Public Health Sector to Other Countries**

Penno et al. (2013) have completed a comparative analysis on the PBF formula in the health care system of New Zealand, England, Scotland, the Netherlands, the state of New South Wales in Australia, the Canadian province of Ontario and the city of Stockholm in Sweden in 2013. In this study they explored the key similarities and differences of these seven different PBF formulas. They identified three themes which recurred over the seven formulas (Penno et al., 2013):

1. All seven formulas made an attempt to identify factors that have a positive correlation with demand and (frequently) correspond to expenditure. These factors were considered to reflect the health needs of the population.
2. Most of the formula made an attempt to compensate for costs that are incurred outside of the need factors spoken of above.
3. Some formulas made allowances for unmet need in order to align with equity formulas.

These can be simplified under the headings Need, Other Cost Factors and Unmet Need, and are discussed next.

### 2.2.2.1 Need

The need formulas work around the concept of identifying factors that explain differences in demand and then align expenditure with them, the implication being that the factors reflect the differential health needs of the region's population. Penno et al. (2013) split these need factors into two broad categories; **Demography** and **Disease Status**.

#### ***Demography***

As it is impossible to measure health needs directly, demographic characteristics of a population are used as a proxy. The population is divided into easily classifiable features that positively correlate with expenditure and thereby infer expected annual expenditure for individuals. Demographic status factors are further split into Age and Sex, Socio-economic status, Ethnicity and Geography (Penno et al., 2013):

**Age and sex** are almost universally used demographic factors and New Zealand is pretty standard when compared to the other six formulas. Interestingly England and Stockholm did not make differentiations due to sex (Penno et al., 2013).

**Socio-economic status** indicators had a wide range of indicators though there were areas such as welfare dependency, education level, income and housing that were commonly found. New Zealand, with its relatively greater income disparity than other countries/regions, puts more emphasis on socio-economic circumstances in order to establish health need, than most, the deprivation index being one of its four independent indicators of need (Penno et al., 2013).

**Ethnicity** is recognised as an independent predictor of need in only two formulae; New Zealand and Australia. Ethnicity is considered to overlap with socio-economic status but remains an independent predictor of need. This is due to the fact that New Zealand has relatively few distinct ethnic groups as well as the fact that there are statistically worse health outcomes for Maori and Pacific populations (Penno et al., 2013).

**Geography** plays a role in influencing individual health status as well as access to health care. However there is a difficulty in differentiating legitimate factors causing genuine variations in health need from variations that could be induced by suppliers. This difficulty means that only five of the seven countries/regions used geography as a factor in their formulas for need. New Zealand is not one of these and addresses

geographical influences in an entirely different way which is described further on. Rurality is not used as a prediction of need either (Penno et al., 2013).

### ***Disease Status***

In five out of the seven formulae, disease status is used in conjunction with demographic factors in order to estimate need. In areas where individual level data exists, personal clinical profiles may be integrated into the formula. Some public health organisations, like Ontario, use it to a greater degree than the demographic characteristics. When such detailed individual level data is not available, area level information can be used to weight allocations. New South Wales use a version of this to incorporate a measure of premature mortality in an area, to the formula. New Zealand, on the other hand, only takes into account demographic information, and disease status is not a measure for the need formula (Penno et al., 2013). However it may be inferred that they try to produce a similar result by splitting the population up via ethnicity, taking into account certain ethnic associated health care problems.

### **2.2.2.2 Other cost factors**

Health plans always contain cost pressures that are not recognised in the capitation component of the formula. All seven formulae make some kind of adjustment for these costs. Penno et al. (2013) has separated these into (1) adjustments that correct inaccuracies in the share of capital that should be assigned a particular health plan and (2) adjustments for market factors that affect the cost of supply.

#### ***(1) Addressing costs of supply:***

There are various factors that vary the costs between different health plans for supplying health care. The measures involve compensatory measures for health plans that have legitimate reasons for an increase in costs for the supply of health care. In New Zealand's case, in less populated areas, rurality is a central factor in determining the costs of supply of health care. The emphasis is on offsetting costs that arise from supplying healthcare in these areas. However it appears that New Zealand does not have as comprehensive adjusters as the other formulae. Areas are categorised as either rural or urban and no distinction is made

for geographical factors. This is particularly relevant as geographical factors are also not included in determining population needs for health care. In contrast, England uses urbanity rather than rurality as a cost driver and examines the higher costs of attracting and retaining staff (with particular interest in non-clinical staff) in areas with higher living costs. Ontario and New South Wales are considered to have the most comprehensive adjustors as they take into account the proportion of specialisation, cost weighted activities and teaching costs over and above the differing costs for remote populations (Penno et al., 2013).

**(2) Capital adjustments:**

Healthcare providers that are bound to health budgets based on their population base, become obligated to treat, and are thus exposed to a level of risk when there are patients that they are obligated to treat but are not included in the needs based capitation. In particular for New Zealand this is a concern with overseas visitors (Penno et al., 2013). New Zealand attempts to counter this by using the overseas adjuster which distributes a hypothecated amount based on historical cost information of the health care provision for a foreigner. England had a similar system where small adjustments could be made to balance funding with anticipated population if government policy was increasing population. However this was abolished in 2011 (Penno et al., 2013).

**2.2.2.3 Unmet need:**

Because PBF is a needs-based formula it is important that there is an accurate prediction of health care costs. The areas with greatest need should receive the greatest resources. A common factor to all formulae that Penno et al. (2013) examined was that they were all driven by utilisation. In other words the formulae, which inform the capital components, are created to promote equity of access based on demand. However there are certain groups that underuse health services in comparison to their health needs. This *unmet need* is hidden by past health care utilisation patterns that are used to infer future health care needs. Because of this unmet need the formulae must adjust to take this into account. Penno et al. (2013) suggest two approaches to achieving this, policy based measures and epidemiological measures.

***Policy based measures:***

Out of the seven formulae Penno et al. (2013) only identified four that made an attempt to address unmet need. Two of these formulae, from New Zealand and NSW, have used the approach of drawing on another body of evidence to identify groups susceptible to unmet need and then recognised them through policy-weighted adjustment. NSW has done this by increasing the capitation weightings for Aboriginals to 2.5 times that of other ethnic groups. New Zealand distributes a predetermined proportion of the entire health care budget according to the Maori, Pacifica and other identified deprived groups according to their numbers occurring in the population.

***Epidemiological markers:***

Epidemiology is a branch of medicine that studies the incidence, distribution and control of disease. Both Scotland and England have attempted to use Epidemiological markers in order to define their unmet need with varying success (Penno et al., 2013). This is not used in New Zealand.

**2.2.3 The New Zealand Population Based Funding Model**

As mentioned above, New Zealand uses a PBF model. The PBF formula (PBFF) uses the population of individuals living in a DHB region or district as a base to determine the share of the overall health budget that each district should receive. (Ministry of Health, 2003). The DHB will receive a bulk sum based on this formula and then must meet all the health requirements of the DHB region, as well as, meeting targets set by the Ministry of Health.

*“There are corrections for rurality and age and ethnicity and social deprecation status, but the bottom line is that with that bucket of funding our district health board has to ensure that the health of the [DHB] is provided for.” [Consultant Physician at a DHB]*

Although PBF is a funding scheme, it is inextricably linked to the costing system. The PBF formula is a formula designed to work out the estimated cost of providing health care to a certain DHB. Once the cost is estimated the funding to match that cost will be distributed.



This is why it is so important for hospital, medical and administrative personnel to agree with how the costs are determined. If they do not find the PBFF accurate or legitimate, there is likely to be staff resentment, as the funds they can use are directly tied to this estimated cost. According to the Ministry of Health:

*“The aim of the PBFF is to fairly distribute available funding between DHBs according to the relative needs of their populations and the cost of providing health and disability support services to meet those needs. The PBFF gives each DHB the same opportunity, in terms of resources, to respond to the needs of its population.”* (Ministry of Health (2003), p.Vii).

The formula comprises of: Cost Weights and Adjusters. (Penno et al. 2012).

### 2.2.3.1 Cost weights

According to Penno et al. (2012) Cost weight can be divided into four demographic categories: age, gender, ethnicity and deprivation as can be seen in Table 2.1. The expected costs per member of the population is modelled using the historic average expenditure as the major benchmark for these four demographics.

**Table 2.1: Population-Based Funding Formula Variables.**

Category	Variable
Age	5 year groupings ranging from age 0-85+
Gender	Male, Female
Ethnicity	Prioritised ethnicity: Māori, Pacific, Other
Deprivation	Deprivation Quintile based on New Zealand Deprivation Index 2006

(Penno et al., 2012, p.20)

Once the population has been segregated into these demographics, the Cost Weights are calculated using the following 5 service groups (Penno et al., 2012):

1. Personal Health Other: This is the largest expenditure area in the PBFF budget. It is all non-primary personal services including inpatient, outpatient, maternity and extra services.
2. Personal Health Primary: The second largest expenditure area in the PBFF budget, it includes Primary Health Organisation capitation payments, immunisation, pharmaceutical and laboratory services. Each is calculated separately and then added together.
3. Mental Health: contains only one service area.
4. Health of Older People: this covers home and community based support services for people aged 50-90+.
5. Psycho-geriatric Services (sometimes included in Health of Older People).

Each of these service groups are made up of a number of service areas and the Cost Weights are calculated for each of the service areas separately. The cost weight of the service group is then calculated by aggregating all the service areas together. Once again the five service groups are aggregated to get the total expected annual expenditure for each population group. In order to determine each DHB's share of the cost-weighted funding the costs are multiplied by the projected funding (Penno et al., 2012). However this is not the final amount that the DHB will receive.

### **2.2.3.2 Adjusters**

After the cost-weighted funding amount is decided further adjustments must be made. These adjusters are:

1. Unmet Need Adjuster
2. Overseas Adjuster
3. Rural Adjuster

### **(1) The Unmet Need Adjuster**

*“The unmet need adjuster is a purely policy-based adjustment which assigns weights on the basis of ethnicity and deprivation.”* (Penno et al., 2012, p.56). As discussed in 2.2.2.3 because the cost weights are based on historical use, there is potential for disparities in populations that underutilise the services provided. For example a DHB is funded for a certain estimated population need but the actual population is less than the estimated one. The rationale behind this adjustment is that the funding that would initially go to a DHB that would underutilise, instead flows to a DHB that due to ethnicity and deprivation issues needs additional funding (Penno et al., 2012).

### **(1) Overseas Adjuster**

This adjuster is designed to fund DHBs for the cost of providing health care to overseas visitors. Those that are eligible to have their health care funded for by the state fall into five groups (Penno et al., 2012):

- 1) New Zealand citizens who are only temporarily visiting NZ.
- 2) Those overseas visitors that are covered by the reciprocal agreements NZ has with Australia and the UK.
- 3) Funding for non-resident citizens from Niue, Tokelau and Cook Islands
- 4) Overseas visitors who receive treatment that is covered by the Accident Compensation Corporation [ACC].
- 5) Refugees.

### **(2) Rural Adjuster**

The rural adjuster recognises that there are unavoidable differences between communities when it comes to costs faced by the DHB. This is especially so, with rural areas having diseconomies of scale in providing and maintaining acceptable levels of service when

compared to urban hospitals. (Ministry of Health, 2007). The rural adjustment redistributes a portion of the funding according to four factors as can be seen in Table 2.2:

**Table 2.2: Rural Adjuster Models**

Factor	Description
Fixed Cost Element	A cost incurred by a DHB regardless of its population size.
Travel Times	Certain services require the nurse/clinician to visit people in their homes. Geography and population distribution will determine the number of contacts that can be made in a working day.
Access Issues	Communities will expect to have 'reasonable access' to certain services regardless of where they live.
Access to higher level services	Very ill patients in more remote communities may be required to be transported long distances to receive more specialised services.

(Penno et al., 2012, p.57)

There are seven components of the rural adjuster (Penno et al., 2012):

- 1) Inter-hospital Transfer: costs of inter-hospital transfers falls disproportionately on rural facilities. IHT reflects the cost of transporting patients by ambulance outside of centrally funded road ambulance service.
- 2) Community Services: adjusts for the greater travelling distances health professionals in rural areas must travel to provide services at a patient's home.
- 3) Small Hospital Facilities: adjusts for the diseconomies of scale faced by small hospitals when providing health care and health care facilities.

- 4) Governance Costs: adjusts for the diseconomies of scale faced by small hospitals when meeting ministry imposed governance requirements.
- 5) Offshore Islands: only three DHBs receive funding to provide health care to offshore islands; Auckland, Hawkes Bay and Southern.
- 6) Rural GP Costs: Rural GPs receive additional funding in recognition of the higher costs associated with recruiting and retaining staff and maintaining reasonable working hours.
- 7) Travel and Accommodation: DHBs must reimburse eligible patients for travel and accommodation costs. This adjusts for the disproportionate percentage of these costs falling on rural DHBs.

For the focus of this study we are most interested in the Small Hospital Facilities, Governance Costs and Inter-hospital Transfer components of rural adjusters as these are the most relevant to the case DHB and are areas that have the potential to cause tension between clinical and management personnel within the hospital as no PBF system can be perfect.

#### **2.2.4 Potential Weaknesses of New Zealand Population Based Funding Model**

Population-based funding models are considered to be a key method for reducing health care costs (Elissen et al., 2014). They are also considered to give health care delivery a more person centeredness foundation (Elissen et al., 2014). PBF provides the ability to assess a target population and then accurately estimate the future health care needs of the target population by disaggregating the population based on expected health care needs, at least in theory. While the use of cost weights and adjusters is a good basis, there may be inadequate insight into which combination of factors used to design cost weights and adjusters can effectively predict the health care needs of a target population and the costs of doing so (Elissen et al, 2014).

There is uncertainty surrounding the exact composition of PBF and the PBFF. (Penno et al., 2012, 2013). The process is complicated and greater transparency is needed to be able to answer such questions as:

- *Whether the allocations made under the PBFF reflect current health needs across the country or whether there are systematic errors in how funds are allocated; and,*
- *Whether the methods used to determine the cost weights and adjusters could be further improved (Penno et al., 2012, p.16).*

Penno et al. (2013) urge for the need for greater transparency around the funding process in order to increase understanding and create constructive discussion and debate.

Other issues are identified in the comparison between different PBF models as discussed previously. For example, the rural adjuster for the cost of supplying health care is divided into rural and urban categories and general geographical information is not taken into account (Penno et al., 2013). This can lead to instances where a DHB could not be particularly rural when it comes to population but may have certain geography in the area that disproportionately increases transports costs, like a range of mountains, resulting in inaccurate funding apportionment.

DHB's could get penalised for the type of services they provide. For example, almost 50% of total expenditure is delegated to Personal Health Other. This includes maternity care, inpatient and outpatient. However only about 25% of total expenditure is allocated to mental health, psych-geriatric services and health of older people (Penno et al., 2012). Patients with mental problems, dementia and other issues found in old people can be very time consuming and costly to treat. Older patients are less healthy and more prone to getting sick easier and recovering slower thus raising the average health care costs for these kinds of patients. PBF can reflect the population but not necessarily reflect the health problems found in certain demographical groups such as older people. A DHB with a population that is aged, may suffer financially from having to provide the comparatively more costly health care associated with aged patients.

In another example, the rural adjuster component, Small Hospital Facilities, is designed to reduce the diseconomies of scale that can be found in rural DHB's when compared to the facilities available to urban DHB's. (Ministry of Health, 2007). However according to Penno et al. (2012), the methodology that is used to calculate this adjuster has issues with poor quality

data. The model is built around information that only comes from inpatient data. There is no data used that captures outpatient activity which is just as relevant to the diseconomies of scale. (Penno et al. 2012). This can be of particular relevance for our case DHB, as the target population is an aging one and outpatient activity for such patients is often ongoing and costly to the hospital. This position also lends itself to the idea that a more sophisticated costing system is needed in order for the PBF system to improve its efficiency and accuracy. Without accurate costing there cannot be accurate funding. Large hospitals that can afford more sophisticated costing systems therefore have the ability to work the PBF system to their advantage while it is hypothesised that inaccuracies in the PBF system create tensions between management and clinicians in small hospitals.

### **2.3 Costing systems**

Information that is generated by costing systems has a crucial role in decision making and has a vital role to play in organisational performance. Some of these crucial uses include determining the product or service mix that will be offered, determining decisions on outsourcing and assessing investment alternatives (Garrison et al., 2012). Determining the service mix and making outsourcing decisions are particularly important for small hospitals that suffer from limited resources. Small hospitals are able to offer a very limited number of services due to resource and facility constraints and so have to consider carefully what the best mix of services they can offer are. As a result they often have to outsource services. Whether this outsourcing is in the form of Inter-district flows, sending patients to private practices or bringing in locums, informed decisions are key. The type of the cost system institutionalised therefore dictates the quality of the costing information used in the decision making process.

### 2.3.1 Traditional Costing Systems

A **variable costing** system concentrates on assigning direct costs, for example direct labour and materials costs, to a product and/or service when calculating cost by tracing costs (Drury, 2011). Cost tracing is where costs are directly matched with a product and/or service being produced. Cost allocation is used to apply indirect (overhead) costs to a product and/or service. According to Geri & Ronen (2005) the flaw in the variable costing system lies in the allocation of indirect costs. It is often the case that the variable costing system only uses one overhead pool. An arbitrary base is then used for variable overhead allocation while fixed overheads are not considered in the cost calculation and instead a contribution margin is calculated.

Like the variable costing system, the **absorption costing** system assigns direct costs to a product and/or service through the tracing of costs (Drury, 2011). Overhead costs are often then allocated on a volume related basis. According to Geri & Ronen (2005) this system of volume related allocation is also inherently flawed. This is because it allocates fixed costs at a proportional rate to units that have been produced but these units are not necessarily sold within the same cost period. In other words fixed overheads from a previous period may be caught in the cost of inventory. This can distort cost information and potentially lead to an inaccurate understanding of the actual costs incurred in the production or provision of service process.

Although the benefits of traditional absorption and variable costing systems can be found in their simplicity and hence lower running costs, these costing systems have also been criticised for using an overly simplistic and arbitrary approach to overhead allocation. In particular volume based allocation is considered to be flawed as there are numerous resources used on activities that cannot be related directly back to physical volume (Hussain & Gunasekaran, 2001). The traditional absorption systems were developed when direct labour and material costs were indeed the most significant costs making volume based allocation relevant.



However, as some organisations become increasingly more complex, the proportion of total costs that is attributed to overheads also increases (Brown et al., 2003). This makes the volume based allocation method less relevant because of the fact that it is not change in volume that normally causes a change in overhead costs. Management's understanding of how costs are incurred can then be distorted. Furthermore, not enough attention is given to any rapid increase in overheads that occur, nor to where any such increase may originate from (Hussain & Gunasekaran, 2001).

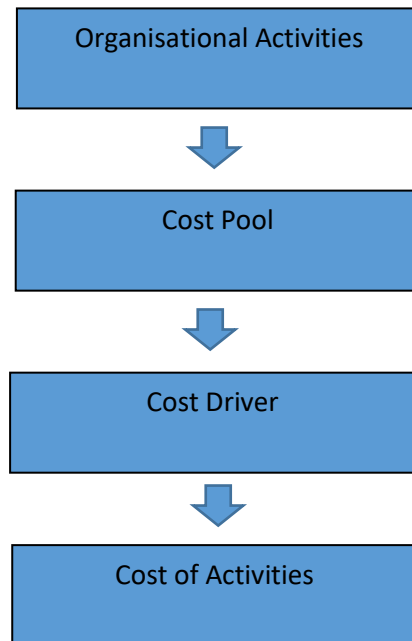
According to Drury (2011), using volume-based drivers to assign non-volume related overheads can result in distorted product and service costs. The extent of this distortion depends on the percentage of overheads that are non-volume related. If the proportion is minimal then the distortion may be insignificant. However this is not the case within hospitals as many of their most significant overhead costs, such as facility and salary costs, are not volume related. Drury (2011) states that when a large portion of total overhead costs are not volume-related and there is product or service diversity (where products/services do not consume resources in similar proportions to each other), then traditional costing systems are inappropriate. If Drury's reasoning is followed then traditional absorption costing systems in hospitals are liable to produce distorted cost information, something that not only effects internal decision making but external funding as well. Therefore an alternative costing approach to overhead may be more appropriate.

### **2.3.2 Activity Based Costing**

Activity based costing is a costing methodology that first identifies the organisation's major activities that are involved in supplying a product or providing a service. Each activity is assigned into a cost pool where the total overheads costs of that activity are determined. It then identifies a cost driver for each of the cost pools. The overheads from the activity cost

pool are then allocated to a particular product/service according to the cost drivers (Drury, 2011) as shown in Figure 2.1 below

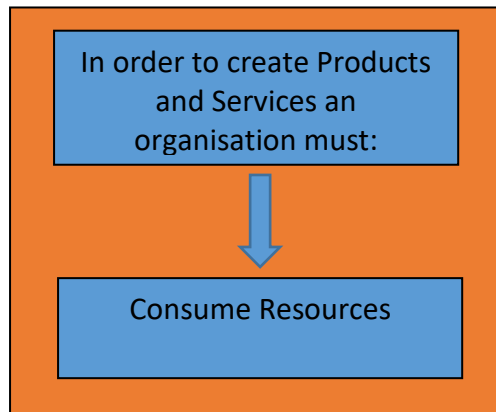
**Figure 2.1: Steps in the Activity-Based Costing Methodology**



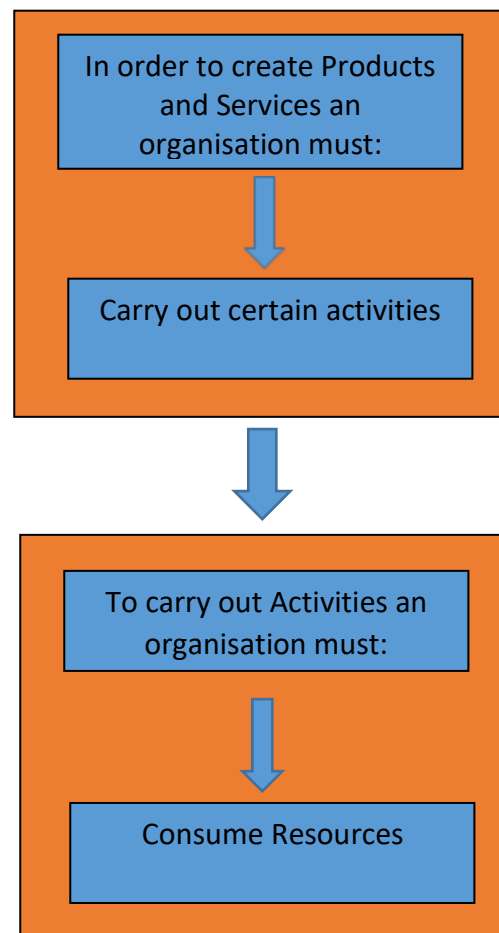
A key difference between traditional absorption costing systems and the ABC system is that physical output of goods and services is what drives costs in volume based allocation, while in the ABC system it is the organisational activities that supply the goods and services that drive costs (Cooper & Kaplan, 1992), as illustrated on the next page in Figure 2.2 adapted from van Kesteren (2014, p.12).

Figure 2.2: The Traditional versus Activity-Based Costing View

**Traditional Costing View**



**Activity-Based Costing View**



Sourced from van Kesteren (2014, p.12)

Colbert & Spicer (1998) considers that a well-designed activity based costing system reflects an understanding of the activities and processes that generate overhead costs far better than the arbitrary nature of traditional costing systems' volume based allocation of overheads. Activity Based Costing systems allow *'the costs that cannot be allocated directly to products or services [to be] captured in overhead pools and allocated to products [and services] based on activities that have cause-effect relationships with cost incurrence'* (Brown et al., 2003, p.7). The process of allocating these costs requires a comprehensive understanding of how overhead costs are incurred and the successful identification of activities and processes and

the cost drivers associated with them. A better understanding of all this enables more accurate overhead allocation and this leads more accurate costing and more informed decisions about product and/or service mix (Brown et al., 2003).

Although the activity based costing system will give more accurate costing information, there is also the fact that that more complicated/sophisticated costing systems cost more to install and utilise. The more accurate the costing information the more it costs to collect and analyse it. The most efficient costing system is not the system that gives the most detailed and accurate costing information but the system that gives you the information that you need at a cost that is reasonable. All costing systems are created for a specific purpose, having met that purpose more detail is not needed.

### **2.3.3 Purpose of Costing Systems and Complexity**

A study performed by Pizzini (2006) examined the *'association between cost-system functionality, managers' beliefs about the relevance and usefulness of cost data, and actual financial performance using a sample of 277 US hospitals'* (Pizzini, 2006, p.179). She did this by examining the effects of four critical attributes of cost system design; the level of detail the cost system provided, the ability to disaggregate costs according to behaviour, the frequency of cost reports, and the extent of variance analysis. Pizzini found that the level of detail in the costing system was significantly positively associated with the usefulness and relevance of the data. This lead to better decision making and financial performance, suggesting that there is a positive relationship between the complexity/sophistication and effectiveness of the cost system.

Interestingly, she found no relationship between the level of detail capability of the costing system and the expense per admission. Expenses per admission are largely driven by clinical staff and not management. Research would suggest that efforts to reduce costs have been directed at administrative processes and not the clinical processes (Shortell et al., 1995;

Pizzini, 2006). It is further suggested that ultimately the area that has the ability to most significantly reduce costs is the area of direct costs of patient care.

Although Pizzini's research seems to suggest that sophistication of a cost system has a positive relationship with decision making and financial performance it does not take into account the purpose for which the costing system is used. Cost systems are used for many different purposes. Cooper and Kaplan (1992) identify three primary functions of cost system:

- Valuation of inventory and measurement of the cost of goods sold for financial reporting.
- Estimation of the costs of activities, products, services and customers.
- Provide accurate and timely cost information and economic feedback to managers and operators about process efficiency to make both strategic decisions and operational improvements.

They argue that multiple cost systems are needed to meet these needs however a large majority of firms have only a single system which is used for several purposes (Drury & Tayles, 2005). Organisations must therefore find a cost system that adequately provides for all their cost information needs without losing too much effectiveness. For the purposes of management accounting, a general distinction between operational purpose (cost reduction, performance measurement etc.) and strategic purposes (customer profitability analysis, product pricing etc.) is made (Cooper and Kaplan, 1992). Normative research generally argues that use of costing systems for operational purposes requires a higher level of complexity than the use of costing systems for strategic purposes. It is also argued that the level of complexity should differ depending on the purpose of use of the costing system. (Cooper and Kaplan, 1992), (Player & Keys, 1995).

Schoute (2009) looks at the relationship between cost system complexity, purposes of use and cost system effectiveness. He divides the purposes for which the costing system is used into two categories;

- Product planning purposes (strategic)
- Cost management purposes (operational)

Schoute (2009) found that when there were higher (lower) levels of usage of the system for the purposes of product planning, the cost system complexity negatively (positively) affected the intensity of use and satisfaction in the system. When there were higher (lower) levels of usage of the system for the purposes of cost management the cost system complexity positively (negatively) affected the intensity of use and satisfaction in the system. He concluded that the costing system would be most effective when its purpose of use and complexity were aligned. From this we can determine that a happy medium needs to be found between complexity and purpose and more complexity does not necessarily equate to more effectiveness. Thus we need to have some measurement for the sophistication levels of a costing system.

#### **2.3.4 Determination of Level of Sophistication of Costing Systems**

Al-Omiri and Drury (2007) provide a system in order to measure the sophistication of a costing system. Al-Omiri and Drury (2007) use the two stage approach to overhead allocation and break down both traditional and ABC systems into two stages.

In the traditional two stage approach the first stage involves service department costs being allocated to certain production departments. In the second stage these allocated service department costs and any overhead from the producing department are then traced to a specific product or service according to the specific departmental overhead allocation rates

(for example number produced or direct labour hours). Usually only a single allocation rate is used. The drawbacks of this system have been previously discussed in section 2.3.1.

The activity based two stage approach involves service department or overhead costs being allocated to certain activities, with the first stage being essentially the same as the traditional approach. The second stage involves separating the costs into cost pools so that these different types of costs can be traced more accurately as each cost pool has its own cost driver.

Within these two stages Al-Omiri and Drury (2007) measure costing system sophistication on a continuum based on four factors related to assigning indirect costs. These four dimensions are:

- (1) the number of cost pools,
- (2) the number of different types of cost drivers used in the second stage of the two-stage overhead assignment process,
- (3) the types of second stage drivers used, and
- (4) the extent to which direct assignments or resource drivers are used in the first stage of the allocation process (Al-Omiri & Drury, 2007, p.401).

The first dimension is the number of cost pools. The assumption is made that a greater number of cost pool means the costing system is able to better capture the variability in the resource consumption of the different cost pools. The greater the number of cost pools the higher the level of sophistication (Al-Omiri & Drury, 2007).

The second dimension of sophistication is the number of different types of cost drivers used in the second stage. A greater variety of cost drivers allows for cause and effect drivers to be determined and more accurately measure the resources used by each cost pool. The greater the variety of cost drivers the greater the level of sophistication (Al-Omiri & Drury, 2007).

The third dimension of sophistication is the extent to which the costing system makes use of transaction drivers or duration drivers in the second stage. Duration drivers are considered to be more sophisticated than transaction drivers because transaction drivers assume that the same amount of resources are used with each repetition of an activity while duration drivers measure according to the time it takes to perform the activity each time (Al-Omiri & Drury, 2007).

The fourth dimension is the extent to which the allocation process relies on directly assigning costs to cost pools or the use made of cause and effect driver in the first stage. The higher the extent of reliance and use the higher the level of sophistication (Al-Omiri & Drury, 2007).

However Al-Omiri and Drury, (2007) realise that these four dimensions are not homogenous. In other words it is only possible to claim that one costing system's sophistication level exceeds that of another costing system when the former exceeds the later in all four dimensions. Thus they developed four contextual factors to determine where along the costing system sophistication continuum the costing system lies. These four contextual factors are:

- Number of first stage drivers.
- Number of different types of second stage cost drivers.
- ABC or traditional costing systems.
- Direct or absorption costing systems. (Al-Omiri & Drury, 2007, p.403)

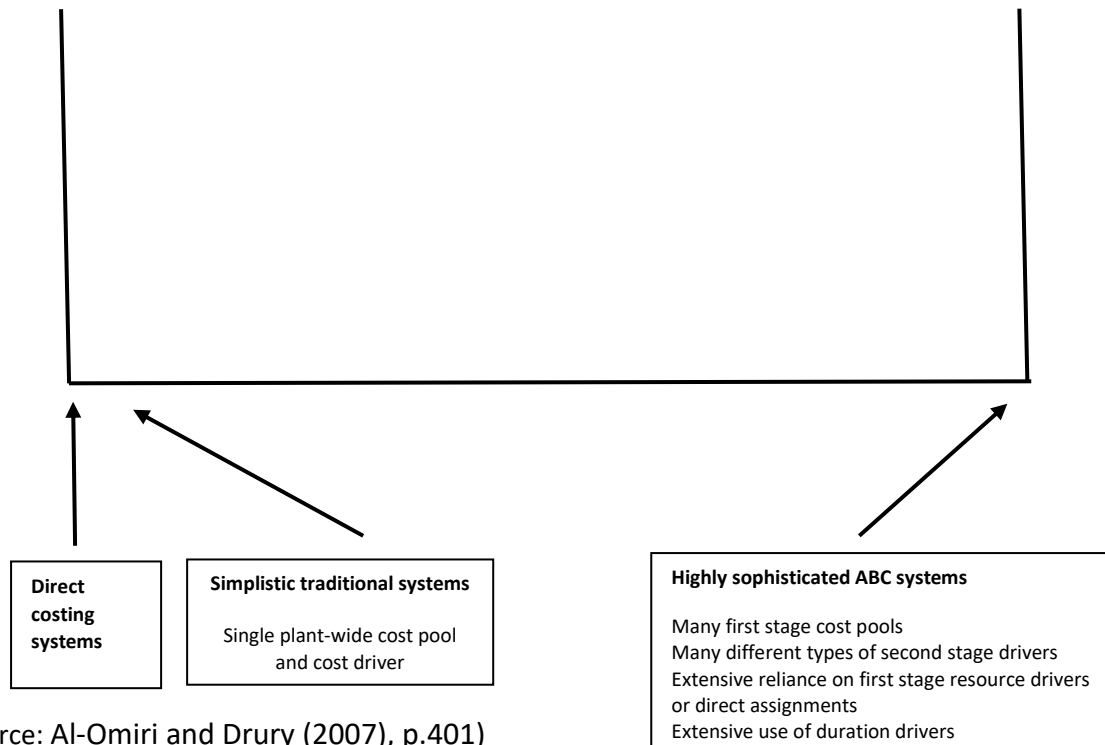
Figure 2.3 below represents this continuum of sophistication for product costing systems. The extreme left represents the most simple cost systems where there is only a single plant wide cost pool for measuring indirect costs. The extreme right represents the highest levels of sophistication where there are many cost pools and varieties of cost drivers as well as extensive use of duration drivers (Al-Omiri & Drury, 2007).



**Figure 2.3: Costing System Continuum of Sophistication**

Lowest level of Sophistication

Highest level of Sophistication



(source: Al-Omiri and Drury (2007), p.401)

Using Al-Omiri and Drury's (2007) measure of costing system sophistication, the next step is to place the costing systems of the New Zealand DHBs onto this continuum and determine the level of sophistication of the case DHB.

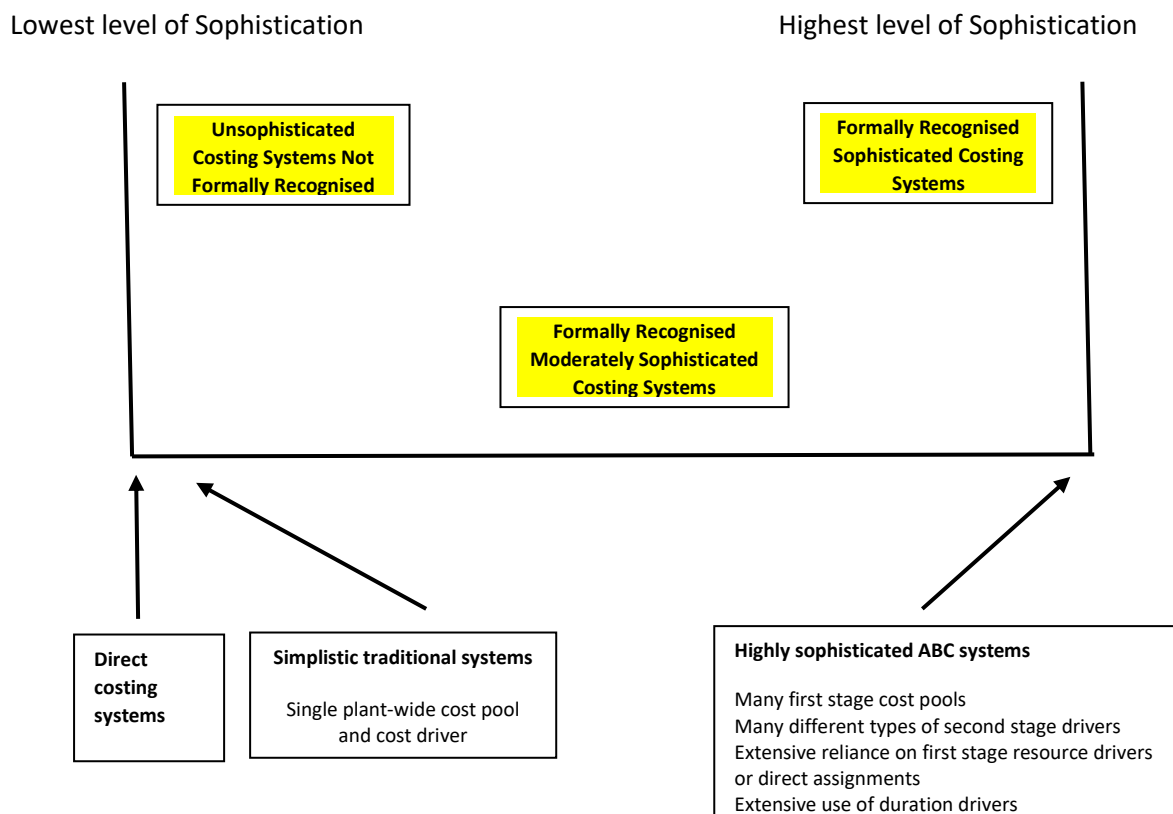
### 2.3.5 Costing System Complexity in New Zealand Public Health Care

Van Kesteren (2014) divided the costing systems in the New Zealand Public Health Care Sector into three categories of complexity.

- (1) Unsophisticated Costing Systems Not Formally Recognised
- (2) Formally Recognised Moderately Sophisticated Costing Systems
- (3) Formally Recognised Sophisticated Costing Systems

These sophistication levels developed by van Kesteren (2014) can be placed on Al-Omiri and Drury (2007) measure costing system sophistication continuum as seen below in Figure 2.4 adapted from (Al-Omiri & Drury, 2007, p.401)

**Figure 2.4: Costing System Continuum of Sophistication Adjusted for NZ Public Health**



### **(1) Unsophisticated Costing Systems Not Formally Recognised**

These costing systems are described as costing systems which use simple techniques and practices to provide service level cost information to the National Cost Collection and Pricing Programme (NCCPP). However these systems are not sophisticated enough to provide event-level cost information. van Kesteren (2014) suggests that smaller secondary health care providers tend to use these unsophisticated systems that are not formally recognised by the NCCPP.

### **(2) Formally Recognised Moderately Sophisticated Costing Systems**

The second level of cost system sophistication is the formally recognised moderately sophisticated costing system. This level of sophistication provides a certain degree of event-level data to be fed to the NCCPP group while not becoming cost prohibitive to small DHBs. However although there is event-level information it lacks the ability to allocate overheads to patient level events. Inaccurate overhead allocation reduces the value of the cost information when making cost comparisons, benchmarking and price setting. The most commonly used form of a costing system with this level of sophistication is the activity-based system CostPro (van Kesteren, 2014). This is also the system used by the case DHB in this research.

### **(3) Formally Recognised Sophisticated Costing Systems**

Formally recognised sophisticated costing systems provide a far more detailed event-level information. It allows for the identification of 'value-add and non-value add activities to reduce product and service costs; provide data to the NCCPP group (to influence National Price); to make and/or support IDF decisions; and to support funding decisions in non-standard services' (van Kesteren, 2014, p.94).

We can now determine that the costing system for the case DHB falls into the middle category of formally recognised, moderately sophisticated costing systems, however we cannot determine whether or not this costing system fulfils its purpose at this level of

sophistication. The costing system is responsible for not only providing costing information internally but also for providing costing information externally for the determination of PBF and IDF. This research is not designed to determine this though, and is designed to determine the perception both clinicians and management have of the efficiency of the system and how it currently meets its purpose with regards to internal, management decisions and PBF and IDF.

## **2.4 Inter-District Flow and Transfer Pricing**

Inter-District Flow costs, along with PBF are also determined by using costing information. Precise costing information is therefore important in the accurate estimation of IDF costs. This is of particular relevance to small hospitals as a large portion of their costs are IDF costs due to their limited facilities and resources.

### **2.4.1 Inter-District Flow**

As Ashton et al. (2008) notes most DHBs do not and cannot provide a full set of services. This means that patients from one DHB are often treated at another DHB. However due to population based costing each DHB is considered to be funded for any treatment that a member of its population may require. If they lack the facilities to treat a particular patient and have to transfer that patient to another DHB then responsibility for the costs for that patient's treatment still fall to the patient's origin DHB. The reason for this is that according to the PBF model the origin DHB should still have been funded for these patients' treatments as funding is allocated according to population health needs and not according to available facilities. In the same way the receiving DHB would not be considered funded for any patients originating outside their DHB population. Therefore in order for the transfer of patients to be able to occur the two DHBs need to come to an agreement and be able to determine the price

for which these health services will occur (Ashton et al. 2008). This purchasing of health services from one DHB to another is done through IDF.

The NCCPP group sets National Prices. The prices that they set often become the default IDF prices. The main motivation for setting these prices is to promote and enable inter district flows to be effective and efficient (van Kesteren et al., 2016). DHB's are not restricted from entering into their own individual negotiations, however they are encouraged to use the national prices because that cuts back on potentially lengthy and costly negotiations which can be considered a waste of resources (van Kesteren et al., 2016). This sounds good in theory, but the problem remains that IDF's main effect is on small DHB's as big DHB's are far less likely to face the situation of not having the facilities to treat a patient. At the same time funding policy is focused on high density, large DHBs with far more complete facilities. This can lead to a potentially devastating impact on small DHB's.

The use of National Prices for IDF creates a situation not dissimilar to an organisation that dictates interdepartmental transfer prices. This similarity will be explained in the following section. Van Kesteren (2014) posits that there is an inter-organisational process of transfer pricing that occurs to facilitate the inter-district flows between DHBs and so the underlying foundations of transfer pricing can be found in the determining of IDF prices. This brings about the 'transfer pricing problem.'

#### **2.4.2 Transfer pricing**

According to Baldenius & Reichelstein (2006) the transfer pricing problem is the commonly known term for a number of strategic and practical issues related to Transfer Pricing. These include;

1. *resolving pricing disputes between divisions via negotiation, arbitration or directives;*
2. *giving divisions the freedom to decide whether to buy and sell amongst themselves;*
3. *allowing divisions to source externally when resources are available internally;*
4. *deciding what type of transfer pricing method to use;*
5. *determining the final price transfers will be made at (van Kesteren, 2014, p.24)*

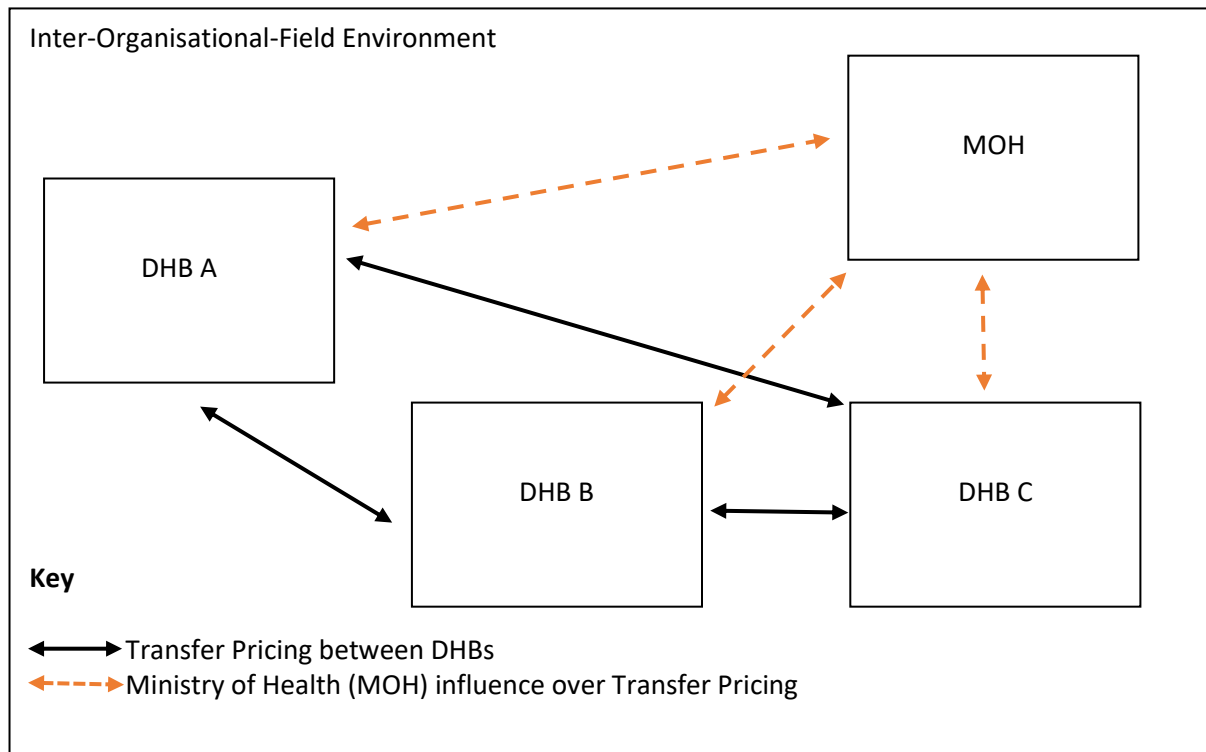
Other factors also need to be taken into account. These factors are of a wider organisational scope where size, management's decision making capabilities and freedoms, product diversity and the overarching strategy of the organisation also play a role in determining the transfer price (Pfeiffer et al., 2011).

Two types of transfer pricing can clearly be distinguished here. Cost-based transfer pricing, which is recommended, and Negotiated transfer pricing. Van Kesteren (2014) posits that the underlying foundations of transfer pricing are applicable within the context of the New Zealand Public Health Care Sector. Specifically van Kesteren applies transfer pricing rationale to the area of IDF between DHBs. According to van Kesteren, within a decentralised organisation the buying and selling divisions will act separately for the purposes of decision making and performance. Despite this they must still act in conformance with the organisation's underlying objectives and accountability frameworks when transfer pricing decisions are made. Van Kesteren states that when making IDF decisions DHB's will conform to this behaviour.

The DHBs function separately when it comes to performance and decision making when IDF decision are made because they have been delegated the authority over their DHB's service planning and provision decisions. However, when making these decisions they must conform with the overarching objectives, directives and accountability frameworks as laid down by the Ministry of Health (van Kesteren, 2014). Van Kesteren therefore states that the transfer price for IDFs can be assumed to be the price that one DHB charges to another DHB for a product or service performed.

The relationship that van Kesteren describes can be seen in Figure 2.5.

**Figure 2.5: Inter-Organisational Transfer Prices in the New Zealand Public Health Sector**

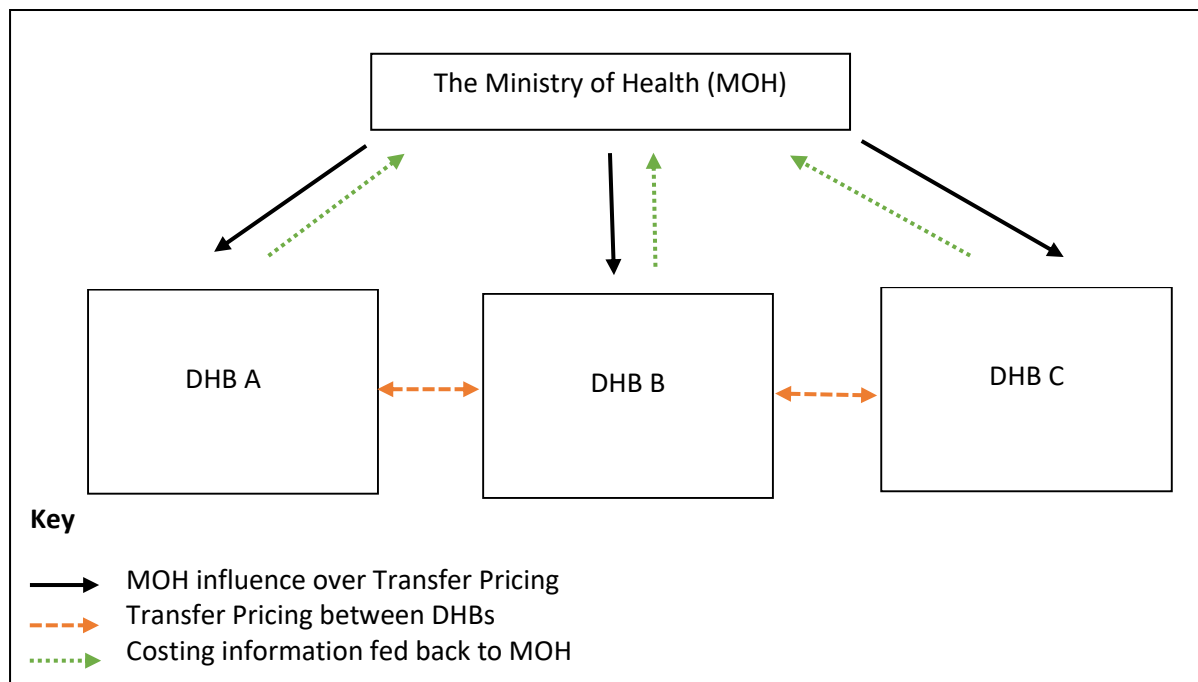


*(source: van Kesteren, 2014, p.33)*

Van Kesteren's model shows that DHB's will have a degree of ability to negotiate transfer pricing between themselves but the Ministry of Health would also have influence of the process of price setting. Van Kesteren's model is an inter-organisational model where each DHB is represented as a separate organisation that can negotiate with each other, but also have an over-arching power (in this case the Ministry of Health) that has the power to set overarching objectives, directives and accountability frameworks that influence the transfer price.

This research runs along the same line of this theory but applies it in a slightly different manner. In this case the different DHB's are considered to be part of a single organisation with the Ministry of Health as the organisation's over all governance and each DHB run as independent divisions in the organisation. This relationship can be seen in figure 2.6.

**Figure 2.6: Transfer Pricing Model within NZDHBs**



In this model the Ministry of Health hands down default transfer prices to the different department DHBs. These DHB's theoretically have the ability to negotiate between each other, however more often than not this is the impractical option as it is time consuming and costly and there is often a large power inequality when it comes to negotiating between the DHB's. This is particularly relevant to small DHBs, hence the norm for them is to simply use the prices handed down by the Ministry of Health. For this reason, for the purposes of this research, the DHB's are more equivalent to independent departments within an organisation than individual organisations with an overarching external influence as in van Kesteren's model. The DHB's then feedback costing information to the Ministry of Health which uses this information to help set the transfer pricing prices that they set down. This model of transfer pricing also demonstrates the importance of the costing information that is fed from DHB's



back to the Ministry of Health. This is especially so for the smaller DHBs who are more likely to use the default transfer prices that are set by the Ministry of Health.

## **2.5 Research Objective**

The scope of this research is focused on investigating three primary areas, that of the costing system within the case hospital, that of the PBF system and its effects on the hospital and that of IDFs and their effects on the hospital. Each of these three areas is investigated from the perspectives of both management and medical staff and looks to provide answers for the following three research questions.

1. What are the different perceptions medical and management personnel have of the current costing system and how do tensions arise from these differences?
2. What are the different perceptions medical and management personnel have of the PBF system, and how do tensions arise from these differences?
3. What are the different perceptions medical and management personnel have of the IDF system and how do the tensions arise from these differences?

If these questions can be answered then management and medical staff will have some idea about how to better facilitate cooperation and communication to reduce tension between the two groups which is essential for the efficient use resources in a constrained resource environment. This is of particular importance to small hospitals as small hospitals need to be more cost efficient than large hospitals.

## 2.6 Chapter summery

PBF is widely considered to be the best public health funding system currently available and among the PBF formulae currently in practice the NZ PBF formula is well accepted, though it has weaknesses. One of the weaknesses that effects all PBF systems is the availability of accurate and detailed costing information. The costing information generated by hospitals is not only important for internal decision making but also plays a vital role in the allocation and distribution of funding. To reach a certain level of accuracy in order to inform funding, costing and IDF, the costing system needs to reach a certain level of sophistication. The higher the level of sophistication the higher the cost of running and utilising such a system. The costing system needs to be able to inform PBF and IDF without becoming too expensive for small hospitals to maintain. At the moment the case DHB is using a system which, while not very sophisticated is still an ABC system (CostPro). However, merely having a sufficient costing system does not mean that it is being utilised to its full capacity. The aim of this research is to determine how medical and management personnel perceive the current costing and funding systems and whether there are tensions that arise in the workplace due to dissatisfaction with these systems or the utilisation of these systems.

## Chapter 3: Institutional Theory

### 3.1 Introduction

This chapter details the theory used for this research and shows how this theory applies to the public health care sector. For this research the findings will be examined through the lens of institutional theory. This research examines how the underlying norms and values that can be found within a DHB differ between medical staff and administrative staff and how these differences can lead to conflict between the two.

*'Scott (2001) describes institutions as social structures that have attained a high degree of resilience; are composed of regulative, normative and cultural-cognitive elements that, together with associated activities and resources, provide stability and meaning to social life; are transmitted by various types of carriers, including symbolic systems, relational systems, routines and artefacts; operate at multiple levels of jurisdiction, from the world system to localised interpersonal relationships; and finally, although by definition institutions connote stability, they are subject to change processes prompted by constant shifts in internal and external organisational environments'* (van Kesteren, 2014, p.37)

Simplifying this definition we can say that Institutions consist of taken for granted rules and shared norms and values. Institutions are social constructions that conform with norms and values of society. Because they are social constructions even though Institutions intrinsically function as a means to provide stability and coherence to the social world, the institutions themselves undergo change (van Kesteren, 2014). Institutional change is therefore the reshaping of the taken for granted rules and shared norms and values.

### 3.2 Changing Institutions

There are two kinds of Institutional change that can occur. Institutional change can be either revolutionary or incremental. (Scott, 2001). According to Dacin et al. (2002):

- Incremental change is a more subtle process where changes evolve over time. The previous institution's norms and regulations gradually wither and the incoming institution's norms and values are gradually adopted along with the gradual change in the nature of the political, social, and/or economic exchanges.
- Revolutionary institutional change, in contrast, tends to occur rapidly with the change being extensive and often potentially leading to large discontinuities between the new and old institutional patterns. Oliver (1992) emphasises this discontinuous nature and terms it deinstitutionalisation, where institutional change is forced rather than a natural incremental change.

There are numerous environmental factors that affect institutional change. These environmental factors can be both internal and external. Internal environmental factors include intra-organisational shifts in political ideologies and heterogeneous/discordant beliefs and practices, while external environmental factors include regulation, legislation, economic conditions, technological advancements, societal expectations and political emphases (Scott, 2001).

The changes in institutions within an organisation can be driven by internal changes to the environment such as the development of contradictions within the internal environment. In the case of this research, contradictions can be found in the regular turnover of governance personnel. Each change of personnel brings with it new expectations of norms and values causing contradictions which force change in the existing institutions. They can also occur through an external shock or jolt (Jepperson, 1991; Greenwood et al., 2002). In other words changes to institutions can be caused by factors that exist within the institution, such as management deciding to 'go green' and become more environmentally friendly, or externally, such as government policy that forces an organisation to implement more environmentally

friendly policies. As all operations within an organisation ranging from the highest governance decisions to the smallest, seemingly insignificant, operations are carried out with the underlying institution as a foundations, externally enforced institutional changes can cause quite a shock to the organisation as a whole. In this study we are interested in the ongoing shocks or jolts that are given to the Public Health Care Sector due to the imposition of a costing and funding systems by the government (Ministry of Health) on the hospital. This research in particular, examines revolutionary institutional change where a costing system has been imposed onto a hospital by its DHB. We are looking to see how this imposition or shock or jolt from an external force affected the intra-organisational institutions.

### **3.3 The Institutions Identified in New Zealand District Health Boards**

Two distinct institutional groups have been identified in the literature. The first group is the governance level with staff who come from a purely financial background (referred to as Group Management). They are very aware of the needs to cut down costs and the limitations in finance that the DHB faces. Though patient care is considered a priority, this care must still remain within the bounds of what is financially possible to accomplish. They operate largely separately from the medical staff that are in charge of administering that care. Accurate record keeping and resource use efficiency are vital to this group. The second group is purely medical staff (referred to as Group Medical). They are very patient focused as they are in direct contact with patients. They have little understanding of the intricacies of costs efficiencies and limitations faced by the DHB and their institutional priority is patient focused.

Often institutions can be in conflict and may compete with each other. This can be problematic as it can undermine the legitimacy of the organisation. Different institutions, in this case the financially focussed institutions of management and the patient focused institutions of clinicians or medical staff, will compete for ascendancy or dominance and this will generate internal conflict and tension. The results of this tension can be a resistance to new ideas and ways of doing things (in this case a resistance to the costing system) as well as

an overall reduction in the success and legitimacy of the system and subsequently the organisation itself (Scott, 2001).

### **3.4 Legitimacy**

#### **3.4.1 External Legitimacy**

*'Legitimacy is a theory that explicitly considers organisations as part of the broader social system and it seeks to describe or explain behaviour rather than prescribe how organisations should behave.'* (van Kesteren, 2014, p.39).

Legitimacy exists when an organisations value system and the value system of the larger societal system of which the organisation is part are congruent (Lindblom, 1994). In order for this congruence to exist the organisations must give explicit consideration to and comply with the expectations of society (Deegan, 2006). This is especially so for organisations within a country's Public Health Sector. The Public Health sector is an extremely visible branch of government and viewed as important to most of society. Society will hold a set of expectations about how the operations of a health care organisation should conduct its operations (Ruef & Scott, 1998).

Hospitals and related care providers are organisations where the primacy of patient welfare is a prominent socially constructed expectation. Its nature is such that any deficiencies in meeting these expectations become immediate targets of media and public outcry. The volatile perception of legitimacy has the ability to affect all levels of governance from the smallest rural hospital to the highest echelons of government. Society will bring censure if they feel that they or their loved ones are not getting the health care that should or could be provided. The question is how does this perception that they are not getting that health care link to the costing system? Funds are allocated to the DHBs through PBF. The government determines the estimated cost of providing health care for the population and then allocates the funds according to that estimated cost.

According to social expectation these funds are expected to cover all health care that society requires. As soon as health care needs cannot be met society will consider it a breach in the social contract and the legitimacy of the costing system which is used to calculate funding will be brought into question and the public health care system will become subject to criticism.

*'Legitimacy is a generalized perception or assumption that the actions of an entity are desirable, proper or appropriate within some socially constructed system of norms, values, beliefs, and definitions'* (Suchman, 1995, p.574).

Whether the disparity between the organisational system and the larger societal system is actual or perceived, if one exists it presents a threat to legitimacy. According to Shocker and Sethi (1974) an organisation operates in society via a social contract. Whether that social contract is explicit or implied the survival and growth of the organisation are based on two outcomes:

- That socially desirable ends are being delivered to the general society.
- The organisation distributes social, political and economic benefits to the groups from which it derives power.

However, in this case the organisation whose survival and growth relies on the social contract is not that of the hospital or DHB but the government itself. Especially for the political party in power at that time. If neither of the above outcomes are met then society will become discontent with the government and the party in power. When society is not content with a government they will not vote for that party in the next election and it becomes a political issue.

How does this tie back into the costing system? Funding is allocated according to the estimated cost of providing sufficient health care to the population within the DHB. If society feels that the way in which these costs are allocated are not legitimate or if they perceive another DHB to be getting and providing better treatment than their own DHB, then the social contract would be broken. Society needs to believe the costing system is legitimate in order

to trust the government and trust that they and their families are getting the best health care possible. As Dillard et al. (2004) states;

*'By designing a formal structure that adheres to the norms and behaviour expectations in the extant environment, an organization demonstrates that it is acting on collectively valued purposes in a proper and adequate manner'* (Dillard et al., 2004, p.509).

If Governments can achieve costing and funding systems that allow for society's expectations of health care to be met, they will be considered by society to have fulfilled their social contract and their systems will be perceived as legitimate and avoid criticism.

### **3.4.2 Internal Legitimacy**

Covaleski et al. (1993) posits that many aspects of an organisations policies, procedures and formal structures have the dual structure of not only having to be efficient and effective but also having to conform to institutionalised rules and expectations of those from whom they derive their power.

*'an organization's survival requires it as much to conform to societal norms of acceptable practice as to achieve high levels of production efficiency and effectiveness'* (Covaleski & Dirsmith., 1993, p.66)

Many institutional theorists concur with this including Dacin et al. (2002); Oliver (1992); Scott (2001); Dillard et al. (2004) and Lounsbury (2008).

Here the Public Health Care Sector can be seen to be in a difficult position. While it is true that the Public Health Care system derives its 'power' from the government, by whom all resources are allocated, the government derives its 'power', at least in New Zealand, from society. The Public Health Care Sector plays a key role between society's increasing demand for more and better health care and the government's struggle to allocate limited resources.



Therefore it is essential for society to see the sector as a whole as legitimate or as mentioned above it will become a political issue. This contradicting pressure can be seen to manifest itself in DHBs within the contradicting institutions that manifest themselves within the DHB's. The struggle to allocate limited resources manifests itself in management institutions where management and governance have efficiency and cost management focuses. In contrast the expectation of society to provide exceptional healthcare manifests itself in the patient focused institution that medical staff have.

However, the focus of this research is not on the perception of legitimacy as a whole from and for society but on the perception of legitimacy of medical and management personnel within this public health care system, in particular their perception of the legitimacy of the costing system. Why is the perception of legitimacy of medical and management staff so important? Medical personnel represent one link between members representing political and economic power (e.g. the government) and society in general. Management personnel represent another link. It is therefore important that the link between medical and management personnel is not broken as both are vital in the chain of communication and information.

Medical personnel are in the position where they must adhere to political and financial pressure (as well as the regulatory and legal structures that monitor and sanction organisational behaviour) but also they must equally consider their social and moral obligations to their patients, that is they *"must consider the social, political and economic framework within which human life takes place"* (Gray et al., 1996, p.47).

Medical staff interact with patients every day and, while many may understand that there are limited resources, it is often impossible for them to perceive a patient's treatment as the most 'cost effective use of resources'. If a patient whose circumstances they are intimately involved in is denied certain procedures indefinitely, or for an extended period of time, they may feel angry and resentful.

While medical personnel are a link between government and society, Management represent one link between medical staff and government. Management are under huge pressure from

government to reduce costs, be efficient and still manage to provide health care that will not break the social and political contract between society and government. Having uncooperative and resentful medical staff makes an already incredibly difficult job much harder and more frustrating.

This can lead to institutional conflict despite the fact that both management and medical personnel have the same ultimate goal; that of providing the best quality health care possible. There is conflict despite having the same goal because there is more than one institution involved with each having a completely different set of taken-for-granted set of assumptions, values and norms. Medical personnel may feel that their value systems are not congruent with management and vice versa. Both parties may feel that resources are not going to where they feel that they are most needed. If either party does not perceive a system to be legitimate, then the legitimacy of the whole Health Care Sector will also lose legitimacy. Lack of perception of legitimacy will cause tension between management and medical personnel. This in turn will effect productivity and cohesiveness between medical and management personnel. This cohesiveness is vital to effective running of the DHB and the provision of health care. Conflict will also ripple out into society at large bringing backlash from society onto government.

The costing system is one of the most vital accounting systems for the determination of the allocation of resources. The costing system is used to help determine what funds are needed for a Hospital to provide suitable healthcare to the whole DHB. The cooperation of medical personnel and management personnel within this system is vital in order for the system to work effectively. However it has been posited by van Kesteren (2014) that;

*'the adoption and use of costing systems may be expected to play heightened, though ritualistic roles in the heavily institutionalised environment of health care, with the fundamental goal of adhering to institutional pressures.'* (van Kesteren, 2014, p.45)

Further, Covalleski & Dirsmith (1993) state that;

*'they may be treated as ceremonial systems for creating and affirming order and meaning, for executing procedures in sanctioned ways, and for providing accounts of*

*activities in terms that make them seem reasonable and acceptable to external constituents'* (Covaleski & Dirsmith, 1993, p.66).

In simpler terms, if medical personnel do not see the system as legitimate they may pay lip service while doing their best to work around the system. Management may do the same. This can be particularly destructive as costing system information and regulation is so vital for the accurate provision of funding. An effectively legitimate costing system can therefore be rendered ineffective by the perception of lack of legitimacy.

This research uses Institutional Theory, especially the concept of legitimacy, to separate staff within the hospital into groups based on their shared underlying norms and values. Once these groups are identified, their perceptions of costing and funding systems, as determined by their underlying norms and values can be recorded through an interview process and then compared to each other in order to see where tensions exist between management and medical personnel. The method of data collection is detailed in the next chapter.

### **3.5 Summary**

Institutional theory and legitimacy is an appropriate theory to use for this research. It enables the clear division of management and medical personnel for comparison and provides a lens through which the reasons why there is conflict between management and medical personnel may be determined.



## **Chapter 4: Methodology**

### **4.1 Introduction**

While there is an abundance of research available on the costing systems (as explained in chapter 2) in large hospitals, there is a research gap where small hospitals are concerned. Further, research and policy decisions are understandably targeted at large institutions, however it remains that small hospitals face circumstances not faced by these larger institutions. A functioning costing system, in particular, is vital to small hospitals. Not only do they have to allocate costs to internal activities, small hospitals are often faced with the need to outsource activities in addition to facing unique issues when it comes to Inter-district Flow (IDF). This makes research into the costing system of small district hospitals a valuable but lacking research area.

Due to the research gap explained in chapter 1 and 2 it is therefore necessary to conduct exploratory research in order to discover the unrecognised issues faced by small hospitals in New Zealand. Exploratory research is research that is conducted when a perceived problem or issue has not been studied or researched in depth before. Exploratory research allows the researcher to establish priorities and develop operational definitions. It also allows for the improvement of the research design for any further investigation into that area of research.

### **4.2 An Exploratory Case Study**

According to Lillis & Mundy (2005), cross-sectional surveys can provide a wide breadth of findings, including insights into regulation, economic conditions, societal expectations, technological advancements and political influence, but cannot provide contextual

explanations for occurrences within an organisation. Moreover according to Al-Omiri and Drury (2007), researchers often use weak measures for their dependant and independent variables, which can lead to survey instruments being inherently flawed. Fundamental terms can be left to the respondents to interpret in a subjective manner, inconsistent findings may be provided and there is heavy reliance on achieving a satisfactory response rate.

Given the scarcity of research related to small hospitals, and the nature of exploratory research, a research method that is able to provide detailed explanations, as well as the ability to follow up on and explore new issues is needed. For surveys to work a level of knowledge into the research area is needed in order to develop accurate and relevant questions. This is not possible in this under researched area, and thus exploratory research is needed.

Case studies provide more depth than a cross-sectional survey. They provide the detail required to provide contextual explanations for occurrences within an organisation. They allow researchers to define fundamental terms and clearly express them to the participants. They facilitate in-depth discussion with key members of an organisation and the insights gained on phenomena within the organisation are clearer (Al-Omiri & Drury, 2007; Lillis & Mundy, 2005).

A single case study, while providing exceptional detail is sometimes considered to be just a story told. It can lack the breadth to provide theory and generalise results to other circumstances which is a strength of survey research. However, the single case chosen for this research is particularly appropriate for several reasons. This research has a primary focus on the particular issues faced by small hospitals and the case DHB is one of the smallest in the country. This DHB also, as explained in chapter 1, has been through a large amount of upheaval where there has been a constant turnover of management staff, each of these has brought a new institution (a set of their own beliefs and values) but have not stayed long enough for an integration of the more constant medical staff's institution with their new management's institution. This case site was also used in a previous multi-case study

conducted by van Kesteren (2014), in which he investigated the costing and funding systems in New Zealand DHBs, but did so from a purely financial position with interviewee participants being from a high level of financial management or from the Ministry of Health. Therefore this research, that includes the level of medical staff practicing in small hospitals, is new yet complimentary to previous research.

Multi-case study can be considered an excellent medium to make up for the weakness of a single case study, but for the purposes of this research it is considered unnecessary. One of the foremost reasons why multi-case study is considered to be unnecessary is that there are serious time constraints involved in the research that alone make a multi case study approach unfeasible. However this is not a key issue as this study can be considered an embedded case study (Yin, 2003). Within this single case, we have two embedded units of analysis. The first embedded unit of analysis is the staff who are primarily concerned with medical practice. The second embedded unit is the financial management staff found within the hospital. Having two units within a single case allows for, while not cross-case analysis, then cross-perspective analysis, and facilitates a comparison between the two embedded units.

This cross-perspective analysis is important. Any lone perspective cannot rule out conflicting explanations as it can only explain one view of empirical reality. (Denzin, 2009). In other words the perspective of medical staff can only explain their reality, a reality potentially limited by a lack of knowledge of the costing system and the policy and financial reasons behind it. At the same time the perspective of the financial personnel is limited in the same way by a lack knowledge of the day to day issues medical staff face. Clearly addressing this research from a single perspective will not enable a complete understanding of the tensions and conflict that occur. For this reason triangulation is used.

### 4.3 Triangulation Method

Triangulation is a method where observations are made from at least two differing points differing points (Flick et al, 2004). These points may be different sources of evidence, different theories and different methods of evidence collection or even different researchers (Denzin & Lincoln, 2003). Triangulation can increase the validity of the interpretation of evidence and findings by giving a more holistic view and a more detailed context (Bourgeois & Eisenhardt, 1988).

There are many types of triangulation. Data triangulation where data is collected from different people and sources at different times and places (Flick, 1992). Methodological triangulation is where there is a combination of methods within a particular study. The first type of methodological triangulation is within method triangulation where more than one method from either the qualitative or quantitative research methods are used within the same study (Denzin, 1997). The second type of methodological triangulation is the across method, also known as the mixed method. This is where both qualitative and quantitative methods are used in the same study (Denzin, 1997).

Researcher triangulation is where there are two or more researcher who are directly involved in both the collection and analysis of evidence. (Flick et al. 2004). Theoretical triangulation is where there is more than one theoretical perspective in an empirical analysis.

For the purposes of this research the data triangulation method will be used. Two distinct embedded units as previously described will furnish two different perspectives. Data from these two differing perspectives will then be analysed and compared to see where tensions and conflict between the two perspectives arises and the reasons for that tension and conflict. By analysing the results from the different perspectives a much clearer and more accurate analysis of the situation can be made, one which is not bias to any one group. Having these



two embedded units will give a much greater ability to generalise than would typically be found in a single case study.

in this case data triangulation is used to find where reality between the embedded cases differs. By using triangulation we can compare the views and opinion we obtain from medical staff and financial/management staff to better our understating and interpretation of the issues as well as find the inconsistencies between them. It is from these inconsistencies that conflict is likely to occur. Further, although there is only one method of data collection there are in fact, two distinct groups that are created by the different institutional perspectives of management and medical staff thereby, creating the multiple perspectives needed for triangulation.

#### **4.4 The Insider/Outsider Position**

A primary strength of this study is the insider/outsider position held by the researcher. In Merriam et al. (2001) they identify a particular challenge to research, stating that if research is to improve, the researcher's perspective is important especially with research that explores across cultures and contexts. Two distinct positions are identified, that of the insider and that of the outsider. Outside enquiry or research is the 'seeking of one absolute truth'. Epistemologically it echoes a logical positive approach. On the other hand insider enquiry or research acknowledges that there are 'multiple realities' and that epistemologically it is akin to an interpretive approach (Louis & Bartunek, 1992).

According to Ritchie et al. (2009) 'It is more appropriate to define the stance of researchers by the extent of their physical and psychological distance from the phenomenon being studied, and less by their paradigmatic position.' (Ritchie et al. 2009, p. 107). In Davies and Harre, (1990) a distinction is made between the 'role' of a person and the 'position' of the

person. They suggest that the role of a person is more static. In this case the role is that of a researcher and this does not change. Position on the other hand is much more flexible.

In every society there are multiple positions *'which people can adopt, strive to locate themselves in, be pushed into, be displaced from or be refused access'* (Harre & Moghaddam, 2003, p.6). Davies and Harre (1990) suggest that within the static role of a researcher, a person can assume several positions according to the different societal reactions taking place within the research parameters. Louis and Bartunek (1992) identify:

*'insider researchers as those who will have had a place in the social group being studied prior to the investigation commencing, whereas outsider researchers are those only beginning to relate to the phenomenon under study at the time of the research.'* (as cited in Ritchie et al., 2009, p. 107).

Caine et al. (2007) discusses the fragile relationship between as insider and outsider. According to Caine, outsiders may be received with surprising openness due to their perceived objectiveness. Interviewees may feel free to impart confidences that they would not feel comfortable imparting to a more closely related person. This is not dissimilar to how a person may feel able to confess to a priest something they would never be able to confess to a close family member. This perceived objectivity allows the researcher to keep a certain distance from the issues thus allowing them to encounter and examine different perspectives (Caine et al., 2007).

However, conversely, Caine et al. (2007) also discusses how outsider researchers cross the boundaries of society between 'us' and 'them' and yet fall into neither category (Baumann, 1991). In this case the 'us' would be medical personnel and the 'them' would be management. 'By straddling boundaries, outsiders can 'bring the "outside" "inside" and poison the comfort of order with the suspicion of chaos.' (Caine et al., 2007, p. 7). This is an issue that an insider would not have to face, being seen as 'one of us' and therefore trustworthy. It is therefore a delicate line to walk.

This is a balance that I believe I am well suited to achieve in this particular case, seeing myself as both an insider and an outsider. Having close family relatives who are a well-known and trusted part of 'us' I can be considered as an insider in part, or in other words someone who already has a place in the social group prior to the commencement of this research. I am already familiar with many of the issues that the medical personnel are facing, allowing me not only to target my questions more accurately, but also am considered trustworthy to a certain extent considering my pre-existing ties to the medical community. At the same time I am also an outsider. While part of this hospital medical community, I am on the periphery of it. My educational background in the field of accounting rather than the field of medicine separates me still further. This puts me in a unique position where I am insider enough to gain trust and have unique insight into the situation, but outsider enough not to incur the awkwardness of a relationship that is too intimate. This works not only for medical personnel but also management as I have financial knowledge that connects us, know the situation, but am still on the periphery of the community.

Having this dual insider/outsider approach also makes conducting semi-structured interviews easier (as explained in section 4.6). I can give some direction to the interviews by already having some idea of the areas of interest, but can also allow conversation to flow easily due to being neither too distant nor too intimate.

## **4.5 Reflection Theory**

Reflection in research is the use of a continuous and flexible thought process when conducting research. (David, 2016). The reflection method allows the researcher to continuously reflect back on the research. The research is broken up into several stages, these stages can include the process of defining the research problem, the choice of theory, the collection of data and the analysis of the data. (Ahrens & Chapman, 2006) The reflection method helps researcher find the link between the research problem, the theory and the data collected. (David, 2016).

This is particularly important in exploratory research where there is no ready-made blue print for the research project. By constantly reflecting on each step the researcher can discover and then eliminate inconsistencies early on as well as fine tune any following research stages. For example reflection on the choice of theory can help refine and focus the formulation of the questions used in the interview data collection process.

The reflection can be used in several ways. In this research reflection is used to validate ideas and tentative findings by cross checking them with data previously collected or previous literature. This is direct reflection. (Covaleski & Dirsmith, 1988) Reflection was first used to analyse previous research on costing systems in public health as well as research into the effect of opposing institutions within an organisation. From reflection on previous research institutional theory was chosen as the most appropriate theory and because of the fact that there was a research gap into the effects of the costing system on medical staff and their views thereof, range of medical staff was then chosen as appropriate interview candidates. An initial set of interview questions was then formulated with the goal of discovering areas where medical staff felt satisfaction with the costing system and where dissatisfaction or conflict arose. Due to the exploratory nature of the research, as well as the semi-structured approach to the interviews, many issues were raised, however many of these were not relevant or useful to this particular research. However through analysis of the results several core areas of interest were pinpointed as areas for further research.

Using the reflection process the results from the first round of interviews were used to refine the theory and develop a second set of questions for a second round of interview. These questions were designed to focus interviewees to expound in further detail areas of particular interest that were discovered in the first round of interviews. Reflection was also used to identify that a second perspective was needed. The answers that were provided by medical staff were often ill informed about and policy of financial reasoning that may be behind the issues (through no fault of their own), and it was decided that in order to get a holistic view of the situation, and avoid bias, the perspective of management and financial staff was needed. The questions were then slightly altered for specific use in interviewing financial staff.

The second way that reflection was used was to compare and validate different interviewees' views in the first round of interviews to assess the validity of the theory used to explain the factors that influenced the behaviour and decisions of the medical staff. (Ahrens and Dent, 1998). Once the theory had been validated and the second set of interview questions was finalised two appropriate groups were identified (medical and management) and a second round of semi-structured interviews were conducted.

#### **4.6 Semi-structured Interview Approach**

Due to the exploratory nature of the research and the scarcity of research in this area there is not enough evidence to create a hypothesis that could be tested through survey based research. A research method that provides a sufficient level of detail is needed. As discussed earlier, any survey based research cannot provide the kind of detail needed. Nor is there enough information and evidence available to be able to properly construct a questionnaire, as many of the issues are not yet known.

The most direct method to access such detail would be a structured interview approach. However, a problem similar to that of the survey arises with a fully structured interview approach. Due to the scarcity of information and evidence, not enough information is available to construct a list of questions that would provide the kind of information and detail required. An answer to this is to use a semi-structured interview.

Warren (2002) suggests that a semi-structured interview is open and flexible, though it does follow a basic framework of the themes a researcher wishes to explore. The researcher will ask a set of questions which the interviewee is free to respond to based on their own experiences and perspectives, in an unrestricted manner (Schram & Steen, 2001). The

interviewee can then tailor his/her follow up questions based on the previous answers and attitudes given by the interviewee.

This form of interview also allows for the interviewer to develop a rapport with the interviewees. This in turn allows the interviewer to probe more deeply into certain issues, allowing for more depth of context to the researcher (Ottman & Crosbie, 2013). It also allows interviewees to have some element of control and for them to feel that issues they find important will be addressed, leading to a more cooperative interviewee. It is particularly useful for exploratory research as it allows for the discovery of issues that the researcher did not foresee when setting up their initial questions.

The semi-structured interview approach does have drawbacks though. There is a lot of reliance on the skill of the interviewer to build a rapport with the interviewee in order to get them to speak about issues that they have not been specifically asked about. The interviewer also needs the skill to pick up on things that could be important and guide the interview to discuss them in more detail. It also requires some level of enthusiasm by the interviewee to talk about a subject and volunteer information. Not only this, but it can also mean that a lot of unnecessary data is collected which makes it harder to analyse the data collected and find important issues.

In this research, interviews are the only process used to collect and triangulate data, no other documents or supporting evidence was used. This is because this research focuses on comparing the perceptions of groups of competing institutions and why differing opinions create conflict. It does not matter whether the assumptions made are accurate or not, all that matters is that the perception is there.

## **4.7 Method of Data Collection and Analysis**

### **4.7.1 Data Coding and Identifying Research Themes**

According to Rubin and Rubin (2013), a central part of the analysis of qualitative research data is the identification of concepts, themes, events and examples that are of relevance to the research objective or question. This is done through marking them in the transcripts and assigning a code to identify these concepts, themes, events and examples. 'Codes are tags or labels for assigning units of meaning to the descriptive or inferential information compiled during the study' (Miles & Huberman, 1994, p.56).

During the coding process some authors, such as Myers (2013), strongly advocate for the use of software, while others, such as Rubin and Rubin (2013) warn that software cannot take into account the subtlety of meaning, nor the importance of a theme to the research, only the number of times the theme is mentioned. For the purposes of this research the manual coding of the data was chosen due to the complexity of the health sector and themes and the exploratory nature of the research.

### **4.7.2 Round 1 Interviews**

This research was granted ethical approval by Pipitea HEC Committee (subcommittee of the VUW Human Ethics Committee) and comprised two rounds of interviews within the same DHB. The first round of interviews were conducted with a selection of medical staff (as detailed in table 4.1) from various departments within the hospital. The purpose of these interviews was to ascertain areas where conflict could arise and where medical staff found dissatisfaction with the funding mechanisms and costing system. The interview questions were open ended and though they provided guidance, the issues that were raised and examples brought up were left mainly to the discretion of the interviewee. The first round of interviews was conducted in order to identify the main themes of conflict prevalent within

the case DHB, to enable a more detailed study to take place (i.e. the second round of interviews).

**Table 4.1: Round 1 of Interviews: Clinicians**

<b>Medical staff member</b>	<b>Length of Interview</b>
Clinician X1	45 min
Clinician X2	1hr 15min
Clinician X3	40 min
Clinician X4	30 min

Table 4.1 shows that there were four medical staff interviewed, one of whom (X3) was subsequently re-interviewed in the second round of interviews. The results of these interviews and analysis is given in Chapter 5.

The interviews were recorded and accurate transcriptions made. All interviewees were given the option of viewing these transcriptions and making changes. No changes were requested by the one person requested their transcript. The first reading of the transcriptions was at a basic level where key words and common issues were manually highlighted, using a colour coded scheme. After several more readings, each at a more careful level, it became apparent that several key conflict themes appeared throughout the different interviews, as highlighted using the colour scheme. From this four main areas of concern were identified:

1. The internal costing system itself (blue)
2. PBF (purple)
3. IDF (green)
4. Inter-personnel conflict between medical staff and management staff (yellow)



Inter-personnel conflict (theme 4) between medical staff and management staff ties in closely with the first three themes because conflict between management and medical staff often, but not exclusively, stemmed from one of these three themes. Other colours were used for additionally identified themes but it was determined that these themes either did not cause the same degree of impact as the above four themes, or, were of no relevance to this research. From this point onwards the four conflict themes will be referred to as the four conflict issues.

Once these four main issues were identified, further analysis of the conflict issues and transcripts made it clear that in order for there to be conflict, as suggested by the four conflict issues, there had to be more than one group (i.e. more than just the clinicians). This also aligned with institutional theory which states that when two institutional group exist within an organisation they can be in conflict and compete with each other (Scott, 2001).

During the analysis of the transcripts, aimed at identifying the two conflicting groups, an *initial* two conflict groups emerged. These two institutional or conflict groups were coded as Group Management and Group Medical. Subsequent to the findings of the first round of interviews it was deemed that, for the second round of interviews, participants from both groups needed to be interviewed so that data triangulation could be used in order to find the influencing factors related to the conflict issues.

#### **4.7.3 Round 2 Interviews**

A new set of interview subjects was then chosen (Table 4.2). In the new set of interview subjects, only one interviewee (Clinician X3) was a participant in the first round of interviews. This was done in order to confirm the conflict issues that were identified in the first round of interviews, and, to gather a wider group of medical staff who came from varying hospital departments

The round 2 interviewees were chosen according to two predefined perspectives. The first group was that of medical staff, with medical training (Group Medical). The second group was that of management staff who had no medical training but had financial training and were integral to the governance of the hospital (Group Management), as indicated in the table 4.2 below.

**Table 4.2: Round 2 of Interviews**

	<b>Length of interview</b>
Group Medical 1	40 min
Group Medical 2	30 min
Group Medical 3	35 min
Group Medical 4	40 min
Group Management 1	60 min
Group Management 2	35 min

The interview questions were more focused for the second round and were created to concentrate the interviewee on the four main issues previously identified. The interview questions were slightly altered for each group in order to best understand the perspective of each group, but in essence were the same (see Appendix 1). Once the interviews were conducted and transcribed, all interviewees were given the option of viewing these transcriptions and making changes. Two interviewees chose to view their transcripts and no changes were requested. The questions had been sectioned into each of the four themes which made coding of the interviews according to themes simpler. The transcriptions were then analysed by theme, looking for areas of difference and commonality in the responses.

Through this analysis process, it emerged that there were not two but three distinct groups. The appearance of the third group was unexpected as it had not been identified in the literature review or theoretical framework phases. This third group was made up of staff who came from a medical training background, had or were still practicing medicine, but were

primarily focused in high levels of governance and management within the hospital. They have little to no financial expertise. The members of this group have a superficial knowledge of financial issues, enough to understand the need for efficient use of resources but direct interaction with patients causes them to be much less efficiency focused than Group Management. They were named Group Hybrid. This can be seen in the table 4.3 below.

**Table 4.3: Second Round Interviewees Redefined.**

<b>Original defined group</b>	<b>Redefined Group</b>	<b>Length of interview</b>
Group Medical 1	Group Medical 1	40 min
Group Medical 2	Group Medical 2	30 min
Group Medical 3	Group Hybrid 1	35 min
Group Medical 4	Group Hybrid 2	40 min
Group Management 1	Group Management 1	60 min
Group Management 2	Group Management 2	35 min

These three groups were then individually analysed around each of the four themes as listed in section 4.7.2. Where differences of opinion within the group occurred, these differences were then analysed using (1) institutional theory (the different underlying norms and values of the groups) and (2) their differences in understanding the costing and funding systems. Once each group had been individually analysed according to the four themes, each group was then compared and differences and commonalities of perspective were identified.

The first group to be analysed was Group Management, the purely governance and management group, as they were considered to be the most well informed and knowledgeable about the processes, strengths and shortfalls of the costing and funding systems. Their views were considered to be closer to the reality of the situation than the other

two groups due to their more detailed knowledge. The results of these interviews and analysis is given in Chapter 6.

The second group to be analysed was Group Hybrid, the management with medical background group. They were considered to be more knowledgeable about financial matters than Group Medical but less knowledgeable than Group Management. They served as a bridge between Group Medical and Group Management, helping to understand the reasons behind the conflict found in the four conflict themes. Once Group Hybrid's opinions were analysed they were then compared to the opinions and views of Group Management. The results of this can be found in Chapter 7.

Reasons for any differences or commonalities of opinion were analysed through the lens of institutional theory in order to see where their institutional norms differed and where these differences could cause conflict. The focus of the research is on the differences in perception of the groups and not the actual facts of costing and funding systems. The last group to be analysed was Group Medical, the purely medical staff. This group was then compared to both Group Management and Group Hybrid. The results of these interviews and analysis is given in Chapter 8.

## 4.8 Summary

By gathering data through the semi-structured interview approach, and analysing the data using data triangulation, reflection and data coding a comparison can be made between the groups. Though the lens of institution theory this comparison led to the discovery of where areas of difficulty lay for small hospitals and reasons for conflict between medical and management staff. The results collected from these interviews are as given in chapters 5, 6, 7 and 8.

In chapter 5 there is an overview of the results and areas of tension (or conflict themes) that were found in the first round of interviews.

Chapter 6 consists of the results found from the analysis of Group Management. This group was the first group to be analysed and written up. As these interviewees had the most knowledge of the actual funding and costing systems, therefore, the most factual perception of these systems can be gleaned from this group.

Chapter 7 consists of the results found from the analysis of Group Hybrid. This is the second group analysed and written up as they have the second highest level of knowledge about the costing system and they form a bridge between the perception of Group Management and Group Medical.

Finally, chapter 8 consists of the results found from the analysis of Group Medical. In this chapter the perceptions from Group Medical are compared to both Group Management and Group Hybrid to gain an understanding of where the differences in knowledge and perception lie and how these can lead to conflict.



## **Chapter 5: First Round Investigation into Areas of Tension**

### **5.1 Introduction**

In the first round of interviews only clinicians were interviewed (Clinicians). The aim of the interviews was to establish whether or not there were perceived tensions between medical staff and management and discover further areas where further research would be beneficial. This section depicts areas of tension with examples given by medical personnel, some of which are taken from the second round of interviews as they provide a clearer understanding of the background to this research (Group Medical). These areas are:

1. Competing institutions, tensions and reliance on goodwill
2. Secrecy
3. Need for clinical leadership at all levels
4. The perception of bad spending decisions
5. The perception of a rigid costing system

These five tensions fall mainly into the fourth main conflict theme (inter-personnel conflict between medical staff and management staff), identified in chapter four, but they also intertwine with the other three conflict themes (internal costing system, PBF, and IDF), as will be discussed in chapters 6, 7 and 8.

### **5.2 A History of Managerial Upheaval**

As stated above, in order to interpret the results from later interviews with Group Medical (chapter 8), it is important to understand the attitude that medical staff have towards management. In order to do this the results from the first round of interviews are important.

The first round of interviews was designed to explore this attitude and identify where conflict may occur between medical staff and management, though purely from a medical staff point of view. Understanding the situation that medical personnel were placed in allows for a better understanding of the mind-set of these personnel.

The DHB has been through a long period of upheaval due to the regular overturn of management and administration.

*“I’ve been here 18 years and in that time I’ve had 10 CEO’s and about twelve general managers and half a dozen CFOs, so there is no continuity so nobody knows what’s going on. They’ve got just enough time to mess things up and then leave.” (Group Medical 1)<sup>3</sup>*

This problem was exacerbated when three DHBs, including this case DHB were joined. This led to the DHB’s administration block being effectively stripped of personnel and equipment and all financial management being moved to one of the larger hospitals in the combined DHB.

*“It didn’t work out because the whole aim was to reduce the management, but they effectively removed management from this place and then added the work from this place to what was already a full time job to the people at [a larger DHB]. Now I don’t think they were intrinsically bad or intended to do a bad job but they were just given yet another job to do and from their point of view they had no loyalty to the hospital, they’d never worked here so they added it to their end of their list of I’ll get round to it sometime and they just didn’t do anything.” (Group Medical 1)*

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<sup>3</sup> Although these clinicians exist within the second round of interviews they still fall into the same group category and in order to best get across the views of the clinicians/Group Medical quotes from the second round of interviews may be used.



In the end the hospital was effectively cut off from management and it became very hard to make even the smallest decisions. One staff member from the first round of interviews stated it got to the point where the biggest decision they could make at the hospital itself was whether to get a new trolley for the ward or not. This, understandably caused huge resentment from clinicians to management staff.

It got so bad that the DHBs split again in 2014. However, now there was another problem. When management personnel was made redundant or moved and all the computer servers were stripped, the hospital lost all its institution knowledge and organisational memory. This caused large problems when new management, who did not understand the institutions that the hospital was running on, came to the DHB once the split had occurred.

*“Every hospital has its own slightly different way of doing things and it’s often evolved over a long period of time. We don’t have registrars so we don’t have a second tier of medical staff. We’ve got a combined ward with medical and surgical patients, we are very different from most other places. We don’t have consultants from ED [Emergency Department] at night, we’re the only hospital that doesn’t have that. So we’ve got different systems that evolved to cope with our particular circumstances. We are one of only two places that have a private hospital that’s integrated with the DHB. There’s all these things that need to be revisited and try and explain why we’re doing that the way we’re doing that and we’ve got to do it with a new set of managers.” (Group Medical 1)*

While the management of the hospital had moved, the clinicians remained and continued on with their already established institutional norms and organisational memory. However, each new leadership method for the governance of the hospital would bring with it a new management institution norms and values which would come into conflict with the institution that had been developed by medical staff.

Because medical staff had retained a consistency that management had not, their institutions were already deeply ingrained and having to face the impositions of new and repeatedly changing institutions from management was cause for great dissatisfaction and tension. These tensions manifested themselves in the following areas (as listed in the introduction to this chapter).

## **5.3 Areas of Tension**

### **5.3.1 Competing Institutions, Tensions and Reliance on Goodwill**

According to institutional theory when, as discussed before, a system is imposed on an organisation there can be conflict between two competing institutions. When two institutions compete for ascendancy the results can be damaging to the whole organisation.

*'There is a clear division between medical and accounting personnel, which negatively affects each, as well as patients, the health delivery system, and society. Specifically, medical personnel often have a negative ill-informed view of costing systems (and the perceived benefits thereof). This can create a culture of resistance to change, which may severely impede the successfulness of strategy and constrain opportunities to improve efficiency within an organisation.'* (van Kesteren, 2014, p.128)

Through the course of the investigation, two distinct institutions became clear. The first institution is that of the medical personnel themselves. Their focus is on how to provide the best possible treatment for their patients and on finding ways to make both their patients and their own lives easier. During the interviews it became evident that the medical staff's own experience with the effects of the costing system was just as important as the direct

results it had on the patients. The importance of this is clear in a Health Care setting, especially in a small hospital, as outlined next.

In this particular hospital there is some dependence on overtime, especially for more senior employees. Senior oversight of a department is important and when there are insufficient senior staff to cover every shift many senior staff feel obliged to work overtime and support their juniors. Even so, there are still times when there is no senior oversight.

*“Other bigger emergency departments would have a senior nurse on duty 24 hours a day. I’m only funded for a week’s equivalent of 1 ½ so I can’t possibly cover 3 shifts a day, 7 days a week. So my busiest times of the day are from 8:00-4:00 which is when [other staff] go off shift and then there is no senior nurse within the department again.” (Clinician X1)*

With a lack of seniority you have situations where the hospital is being run ‘out of hours’ by more junior personnel, who are less willing or able to make decisions. They are also *“less willing to phone the senior doctors at 2:00 a.m. in the morning because they are worried that they’ll get growled at.”* (Clinician X1) This lack of senior presence can put a lot of senior personnel under pressure to work overtime.

*“Sometimes we feel obliged to stay on, so sometimes I start work at say 7:00 a.m. in the morning so I should finish at 3:30-4:30 but sometimes I’m still here at 7:00 p.m. because I can’t just knock off and leave my staff.” (Clinician X1)*

One could argue that paying out this sort of overtime is clearly the more costly option, however, in a hospital where human lives are at stake this is often not the case.

*“But I think that the hospital will see that very differently because they don’t often pay out the overtime and so they rely on the goodwill of staff for sure. So I will get paid my basic salary and then I won’t put in for the overtime.” (Clinician X1)*

This reliance on goodwill is prevalent, not only at senior levels of medical staff but is also prevalent other levels of staff.

It can therefore be seen how it is just as important to focus on a healthy and happy work environment as it is to focus on patient care. Attention to both the provision of excellent health care and to making the medical staff lives easier are necessary. While the former is the main province of the medical staff, it can be argued that the latter is in large part the responsibility of management. Medical personnel’s goodwill is essential to the running of the hospital and if they feel that things are being made difficult for them then that goodwill disappears. Management hold a large responsibility for maintaining this goodwill and so tensions between medical staff and management can easily lead to a drop in patient care.

The second institution is that of management where keeping costs down and providing the best care for dollar value is the most important focus. This attitude is also highly understandable. The DHB is provided with limited resources.

*“We are very aware at an executive level that our task is not only to provide really good high quality services, but it’s to do it within budget.” (Clinician X2)*

Management must decide what services the hospital is capable of providing and what services would best serve the community within that budget.

*“The Minister of Health imposes quite draconian threats on them [management] about them not being able to work within their deficit limitations so the district health board and the managers at the hospital just have to make it work. So there is very little excess around.” (Clinician X2)*

Keeping costs to a minimum is thus essential. Seemingly both medical and management institutions have the same end goal of providing the best health care possible, and medical staff are completely aware of the budget constraints, and even cooperative. So where does the conflict come in? The underlying problem seems to be, not the end goal, but in the process of making decisions on where the money can best be used.

*“There is a constant tension around that [decisions] because the management would argue that doctors are consistently invited to give input and to contribute to management decisions, and at all sorts of levels. There is agreement that there needs to be better engagement between clinical staff and management staff. The problem is that as clinicians we have a high level of apathy toward that process because, partly we don’t have the time and we are not given time as recognised work, and also there is a perception that whatever we say is going to be ignored anyway. So there is a kind of self-fulfilling prophecy.” (Clinician X3)*

The tension that exists between the two institutions is clearly illustrated with these words. In this research I identify several key areas that have led to conflict. The first of these is the perception of secrecy.

### 5.3.2 Secrecy

Secrecy, whether real or perceived, between medical staff and management is a primary area in which conflict arises. It should first be noted that the medical staff interviewed range from purely clinical to medical staff that were mainly in the highest echelons of management. The further separated from any managerial decisions a staff member was, the greater the perception of there being a divide between management and clinicians.

Observations on secrecy and communication ranged from:

*“It’s not conflict between clinicians and finance people. It’s a whole team effort. We all know what the situation is, we all know what we are trying to achieve and we all work together to try and make that work better.” (Clinician X3)*

to:

*“It’s still very much micro managed from very many levels above me. And hand in hand with that micromanagement type system is secrecy where people don’t tell you what’s going on. It’s almost like a need to know basis. You are fighting a war and everything is top secret.” (Clinician X4)*

Staff members whose duties were more evenly distributed between management and clinical work had less extreme opinions than those focused purely on medical duties, though it was noted by one such individual that:

*“I’m sure if I knew more about the costing system I could use it more to my advantage. But I think that at the level where I am at we’re a little bit ignorant about the costing system except for the little bit that we have to do.” (Clinician X1)*

Institutions consist of taken for granted rules and shared norms and values. They can be taken for granted to such an extent (especially when imposed) that the original meanings and reasoning's behind these rules and norms can be forgotten. The tension is probably due to doctors feeling unappreciated and uninformed. As shown in the quote above, there is a level of feeling ignorant and not being able to use the system to the best advantage.

Perhaps ironically, a member of the executive, when asked what strategies they employed when the costing system provided hindrances for them replied:

*“Really you just have to learn the laws and regulations and normally they are there for a reason. People often lambast government’s rules and all the rest of it, but actually allows things to work in a structured way and if we chucked them all out we’d be in trouble very quickly. So knowing them and understanding them and knowing the reasoning behind them is really important.” (Clinician X3)*

This is a valid statement and clearly identifies one of the potential problems with institutions, the fact that they are taken for granted and not necessarily understood. However comment by Clinician X1 is in clear contrast to the statement made by Clinician X3.

This perception of secrecy brings conflict between clinicians and management. Resentment builds toward management and this not only undermines the legitimacy of the system but also can lead to resistance against new management initiatives including those instituted by clinical managers. How realistic this perception of secrecy is cannot be determined with only the point of view of interviewee clinicians identified at this stage. This perception will be further discussed in chapters 6, 7 and 8.

### 5.3.3 The Need for Clinical Leadership at All Levels

Clinical leadership is defined as leadership by clinicians of clinicians (*Malcolm et al., 2002*). A commercial focus within the DHBs can lead to conflict. *'In some situations it [. . .] resulted in a conflict of goals between governance and management cultures on one hand and clinical cultures on the other.'* and how, *'This conflict had serious adverse consequences for clinical quality. . .'* (*Malcolm et al., 2002, p.10*).

The importance of clinical leadership in attaining and improving clinical quality is widely acknowledged in the literature (*Daly et al., 2014; Hobbs et al., 2013; Ennis & Happell, 2015*) and Clinical Leadership at all levels became policy within the Ministry of Health from 2009.

The concept is sound. Clinicians have specialised knowledge that cannot be taken into consideration by a manager in an office who is disassociated from the day to day operations of a hospital. In order for their knowledge and perspective to be taken into account it is vital for a clinician to be involved on a fundamental level in decision making.

It is also a key tool in preventing conflict between governance and management and the clinicians. This idea was not only held by clinicians but was reaffirmed in the second round of interviews by Group Management (chapter 6): *"Working together is by far the best way to get something done. The more they can be involved the better."* (Group Management 1).

However within the case hospital it appears that clinical leadership is not working well in practice and in fact, many medical staff feel that it is merely 'token' with no real substance as illustrated below.



An example of this was when a new x-ray request computer system was imposed on the clinicians. Previously a paper form was used to make requests and given to an orderly who would take the patients to the x-ray department. However when the new system was suggested, the orderly stated clearly it would not work. Despite objections the new computerised system was imposed and subsequently clinicians had to log in x-ray requests into the computer. However they still have to also use the paper form system as the orderly cannot see the computer screen while travelling around the hospital.

Clinicians can see no benefit to the system that has been impose on them and despite the hospital spending tens of thousands on the new system, they are still using the old paper system.

*“So if someone had listened to the orderly at the beginning we wouldn’t have spent tens of thousands on this computer request system, which I don’t know who it helps but it certainly doesn’t help us, and the orderly and us are still doing exactly the same thing we had to do before except now we also have to type it up on the computer as well.” (Clinician X4)*

They see the x-ray software system as a waste of their time and valuable resources that could have been used elsewhere to greater effect.

*“Once again it’s that clinical leadership. Why wouldn’t you ask the orderly who does this every day, is this a better system or do you think we should have this system. And even though they realise and said no, nobody listened to them. So now we have both systems running, one at great cost, but it’s made no impact on how we do things day to day. And that philosophy seems to go right through the system.” (Clinician X1)*

This kind of situation creates distrust and apathy the next time the medical staff's opinions are solicited.

This lack of functioning clinical leadership is supported by other literature. *The Specialist (2014)* featured an article on this same issue. The article talks about how 47% of members in the overall DHBs believe there is no genuine commitment to clinical leadership, with a further 23% did not know. That left a mere 30% who answered yes (*ASMS 2013*). The article further lists some of the reasons for this, which coincide with many of the reasons brought up in the interviews. These reasons include the lack of time for senior doctors to be able to participate, the lack of recognition that the time spent on contributing these inputs constitute work, and a perception that whatever is said will be ignored (*The Specialist, 2014*).

A concept which ties in closely with the lack of a functioning clinical leadership is the perception that there is a general feeling that the whole process of spending money is a negative thing. Spending money on something that may help doctors and patients is seen as a cost and not as an asset. *"The attitude is that health is a liability and anything that costs in health is a liability, therefore it is all perceived as negative."* (Clinician X4). This can bring frustration to the clinicians:

*"You would think that health would be seen as positive in that if you could get a middle aged man with a private business, if you could get his hernia fixed quickly, then he can go back to work start paying taxes and support his family."* (Clinician X4)

When positive factors aren't taken into consideration when determining cost and where and how to invest it can be highly frustrating to clinicians. Another example given was the process of a department rebuild; in this case the Emergency Department. Funding was provided and it was decided to build a new Emergency Department (ED). The layout of such a department is very important to the efficient treatment of patients, especially in a department like ED

where things can get extremely busy and chaotic at a moment's notice. According to clinicians, during the ED planning process:

*"The clinical leadership feels very token. They make everyone from the orderlies to the nurses and doctors discuss what you need, what you want and they make up a whole set of plans that are almost impossible to read, but anyway they look good. But at the end of the day you feel that whatever you say feels irrelevant. What happens it's decided further up the chain and it's decided more on economic grounds than anything else."* (Clinician X4)

The result of this was:

*"You couldn't design a worse department. If you knew how not to design an ED that's what we designed. So obviously the people designing it and those deciding on how it's going to be have ignored pretty much what everybody has said."* (Clinician X1)

In the opinion of the interviewees, the costs to restructure the newly built ED were prohibitively more expensive than had it been built correctly in the first place and thus lead to conflict between management and clinicians, who were clearly shown that their input was not only ignored and failed to be entered properly into any cost calculations or design plans.

Malcolm et al. (2002) address this very issue:

*'First, the maintenance of a trusting relationship between clinicians and management will require a sense of reciprocity. Unfortunately, there have been occasions in the past when management has withdrawn any significant savings achieved from budget holding efforts. Firm agreements of how savings might be spent, and an*

*acknowledgement that quality is an investment rather than a cost to the system, will both need to be part of a sound partnership relationship.’ (Malcolm et al., 2002, p.41)*

This again leads to legitimacy issues as clinicians feel that their fundamental morals and values are not in line with the fundamental morals and values advanced by the costing system as a tool for management decisions.

#### **5.3.4 The perception of bad spending decisions**

It must be stressed that the hospital in question is a very small DHB and one of the biggest contentions is the staffing issue. In a larger hospital having, for example, there would be a senior charge nurse on sight 24 hours a day 7 days a week. Further, instead of having only senior clinicians and junior clinicians there would be a middle layer like a registrar which could act as a support for junior staff as well as a more credible judge of when a senior clinician needs to be called in. However these staffing arrangements are out of the question for a small hospital. They simply could not afford it.

Senior clinicians are pressured to work overtime as well as continuously be on call at night and work full workloads during the day. The junior medical staff have it just as hard, especially those in a department funded for 13 000 patients that actually sees closer to 17 000.

*“Sickness levels will go up, they get fatigued, more mistakes will happen. This is a high acuity area so we see the patients that are very critically ill and then you can have really tired nurses. It’s also a knock on affect as they’ll see the senior management, including myself, walk out the door at a certain point because we can’t be there forever. So they are often left to deal with whatever comes in with no senior backup. So yes there has been a feeling of a kind of abandonment from that.” (Clinician X1)*

However clinicians are well aware of the fact that funding is limited and they make many concessions toward acknowledging this. A hospital is a unique environment with people's health and lives on the line. While there may be complaints and grumbles, there is a general attitude of, 'we just have to get it done.' Common sense is also employed with a mind to cutting costs. However conflict arises when staff see money being spent in ways that seem illogical to them.

For example when there is a need to send a stable patient to a larger hospital for further treatment, and there is no transit nurse available, instead of going in an ambulance the patient must be flown by emergency helicopter. This not only costs about five times as much, but it also leaves the helicopter unavailable for a real emergency.

*"It's a waste of money, a waste of a resource and it puts everybody's lives at risk flying. It's just bad, we should have done it better. I would have wanted it changed not so much because we'd lose money but because it would have been much better for the patient as well."* (Clinician X3)

A medical staff member sees that this unnecessary expense could be solved by merely hiring a transit nurse. However management has to decide whether or not hiring a full time transit nurse, would really be more cost efficient.

There are other examples, one of which is the issue of Locums. Locums are intended to be for areas such as supporting your existing staff for leave, illness, and medical education conferences. They are not designed to fill in for a general lack of permanent staff. However this seems to happen within the case hospital. Not only that, but locums are very expensive because most of them come through agencies and in order to attract people to locum work the compensation has to be financially attractive.

*“Relying on locums is a very cost inefficient way of providing a medical service. This is because they are expensive and they just don’t provide the service that a full time appointment would. They are not interested in providing a service or providing continuity of care. They are just there to fill a gap. So locums are totally inefficient and the DHBs need to rather peruse good recruitment for full time staff to make sure their department are well staffed and run at sustainable levels.” (Clinician X2)*

Not only do they cost more than a permanent staff member but they also provide a worse service in that after their weekend is done they leave and the patients they work on are turned over to the medical staff. This is not ideal for the patient or the doctor as the doctor will not be familiar with the patient (nor the patient with the doctor). It provides a time where issues can be missed and mistakes can happen.

This kind of thing not only makes it harder for the doctors who have to pick up the slack after a locum leaves but they also are angry about the fact that the money used on locums could be used to hire a new permanent staff member who could provide a better service. This to, is seen as a bad management decision and one that undermines the legitimacy of the cost system in their eyes, once again creating conflict between the two institutions.

Another issue is that:

*“From my staff’s perspective, there always seems to be money to a point for managerial roles and roles over in the executive building, but they see there is no money for equipment, so I guess my staff would certainly say that they see money as distributed unevenly. I get to see a different point of view. I guess I see somewhere in the middle area so I have to straddle the fence somewhat between management and working staff.” (Clinician X1)*

Resentment grows when medical staff sees an abundance of management when they themselves are desperate for more staff. This can create a negative view toward management. It also can increase the resistance to any endeavours management would like to implement.

### **5.3.5 The Costing System can be Rigid**

Doctors often have no say on who gets priority for treatment. The decision about who gets treatment can be a tick the box system centred on who is the most critical or acute as well as being based on the treatment costs and funds available. However often the most critical will be an 80 year old, while a much younger but less sick patient gets passed over.

*“The hospital won’t punish an acute patient but may make a chronic patient wait because they [the DHB] don’t have enough money.” (Clinician X2).*

As a result, a chronic patient may be prevented from working by pain, but is not in a life-threatening situation. One clinician narrated the harrowing experience of watching a young patient lose the small business that was his pride, that he had worked so hard to build up, and fall into debt because he was not able to get the hip replacement needed to treat an injury. He was otherwise young and healthy and the injury wasn’t as critical as many other patients unless you took into account the fact that he was a long distance truck driver and his injury prevented him from sitting in a cab for hours on end. Having to watch this kind of tragedy occur will create a lot of resentment in clinicians toward the costing and funding systems.

*“It’s not the surgeon who decides who gets to have that operation, it’s the system. If he doesn’t tick the boxes, he doesn’t get the surgery. So someone who might be in a nursing home with a lump on his or her back might get the surgery. And you might think that’s so silly, but again because we don’t look at health as a positive thing and*

*therefore don't think 'well we should put money into this man because that's going to be better socially and economically for both society and his family.'* (Clinician X2).

Also:

*Because we see costing or expenses held as negative we have this tick box system where the whole emphasis seems to be spending on as little as possible, rather than thinking let's spend things in a positive way that will make things better for everyone."*  
(Clinician X3)

The costing and funding systems do not allow for other circumstances to be taken into account when determining patient priority. This can be really constricting and sometimes heart-breaking for medical personnel.

Not only this, but hospitals must reach certain elective targets for certain procedures. If they fail to reach these targets, there will be punitive penalties imposed by the Ministry of Health. However, there are situations, such as in the orthopaedic department, where trauma does not get counted toward their elective procedure targets. If a trauma case comes into the orthopaedic department it has to be sorted out at once, no questions asked. However these procedures are not counted toward their targets meaning that the hospital has to absorb the cost while still worrying about reaching the elective target. This can also mean that someone who the hospital would have previously been able to help can no longer be helped due to cost constraints.

It can also be rigid with patients who don't quite fit the mould. An example of this was a patient who was previously a strong and fit man before suffering a stroke. The stroke caused him to be occasionally violent and his attending physician felt it was not suitable nor feasible to keep such a patient on a ward of elderly patients. He wished to send the patient to a private facility that the hospital had an established history of sending head injuries to.



However, because the patient was not technically a head injury and did not 'tick all the right boxes' it was very difficult to get the funding for this. When a clinician is faced with these kinds of technical obstructions it can easily lead to situations of conflict. This is because with a very technical and rigid system, clinicians need management support in order to work around the system enough that these kinds of patients can be treated properly. If clinicians are not supported by management at such times they will not only question the legitimacy of the system, they will also present management and lose trust in them.

## **5.4 Summary**

In summary, as can be seen there are five areas or situations where conflict can arise between the institutions of clinical and managerial personnel: competing institutions, tensions and reliance on goodwill; secrecy; need for clinical leadership at all levels; the perception of bad spending decisions; and the perception of a rigid costing system. These situations can lead to a perception of the lack of legitimacy of the costing system, PBF and IDF, and lead to resistance to future attempted implementations by management as well as a lack of trust in management. Although this set of interviews uncovers that tensions between management and medical staff exist it does not reveal reasons for these tensions. In order to do this the second round of interviews is necessary. What follows are the results collected from the second round of interviews.



## Chapter 6: Group Management

### 6.1 Introduction

In this chapter the views and opinions of Group Management, made up of personnel with a purely financial or accounting background are examined. Their views and opinions about the hospital's costing system and information feedback between management and medical personnel and management and the ministry, as well as their views on Population Based Funding (PBF) and Inter-district Flow (IDF) are summarised below.

### 6.2 Costing System

The current impression of the costing system from the management and governance level group is vague. They appear to be unclear on exactly what is recorded: *"I don't really know. We don't really get involved in that. We rely on national prices as being the cost."* (Group Management 1), or how to fully utilise what is recorded: *"We have so many ad hoc reports and people requesting so many things but is it the right information to make these decisions?"* (Group Management 1).

One of the main reasons for this impression is that the DHB has the CostPro system, however, until recently this system has not been maintained or utilised well. *"We have this CostPro system which hasn't been maintained."* (Group Management 2). It seems that some costing information is recorded automatically, some is recorded manually and with the costing system having not been utilised or maintained well, information that needs to be a manual input is not always reliable or even available. *"I know a lot of stuff is still recorded manually"*

*and you wonder why. But whether they think it's relevant and put it in a spreadsheet and compute something I don't know" (Group Management 2).*

At this point in time, the information that this group has available to them is not particularly detailed or sophisticated. For example stock levels for consumables used in theatres are simply maintained at a required level. The stock level is measured every couple of days and someone is in charge of monitoring and purchasing. Although departments have to keep within a budget there is no way to trace the use of the stock to specific procedures or measure the efficiency of use of these consumables. *"We are not complex enough to get it down to individual operations."* (Group Management 2). These sorts of consumables are easy for medical staff to unintentionally, carelessly use. The items are often small or seem insignificant *"so they cannot see exactly how much it cost the hospital when they went in and grabbed a handful of things or discarded them without use."* (Group Management 1). Being able to successfully allocate the cost of such consumables to specific procedures or measure the amount of waste that occurs has the potential to save the hospital considerable money.

However this is just an example of one area where a more sophisticated costing system might be used beneficially, and at first glance it appears that opinions are divided over the benefits of having a more sophisticated system. The first apparent opinion is that the current costing system is not being utilised much anyway, as national prices are what is used to determine costs.

*"We rely on national prices as being the cost. In terms of how we allocate funding to our provider arm, we negotiate volumes of activity and pay then at the national price that may well be quite different from what the cost is for our local provider to actually do it. But we don't have that level of sophistication to say for this purchase unit code is \$x. We don't really use costing information to say 'Oh look we can do that procedure very cheaply over here so buy that over here, but we have another procedure that in*

*our hospital is very expensive so we'll go and buy it from [another DHB] where we can get it for the national price which may be cheaper.” (Group Management 1)*

Not only that, but because of national prices, IDF, PBF, most costs are fixed so even having that level of detail would not be useful enough to justify the cost of obtaining that level of detail. Even if a sophisticated costing system shows that some treatment can be done more cheaply somewhere else, in reality it would not be worth doing. For example medical staff still have to be paid whether they are treating a patient or not.

*For the funder to buy it from another DHB will not save our own provider any money because most of those costs are fixed. For example you have a surgeon and you are paying them whether they are doing stuff or not. (Group Management 1)*

Some interviewees believed it is easier to get your own staff to perform the treatment than make the effort to have it performed somewhere else for slightly cheaper. It saves transaction costs, transport costs and makes the most use of your medical staff. It is also more convenient for the patient to be treated closer to home.

*My personal view on costing systems is that for what you get they take up a lot of resources. In my view, especially in a small DHB most of the costs for the hospital are fixed so even if we found that this case weight we can do cheaper than this one, it is unlikely (unless there was a huge gap) that we would take the business elsewhere. (Group Management 1)*

The opposing school of thought is that having more sophisticated costing system with more detailed information would be a good thing.

*I think if we had some sort of costing and it was recorded accurately it would be able to give us a good guide into what we are doing efficiently and what it is costing in terms of each procedure. More detail would be beneficial.” (Group Management 2)*

One interviewee (Group Management 1) feels that the costing system doesn't deliver enough value for the resources invested and the other interviewee (Group Management 2) feels that more information would be beneficial. However when examined further their opinions were not nearly as opposing as it first appeared. While Group Management 2, believed that more sophisticated information was needed, they did not state that a new costing system was needed, but better use of the current system which they acknowledged was not being used to its full potential. To this purpose they had recently hired a business analysis in order to ascertain what information they had use of with CostPro, what information was useful and how to use it.

*“A more sophisticated ABC system would give us a lot better detail because we've employed a business analyst (late last year) and one of his key things is extracting information from CostPro.” (Group Management 2)*

This was important information for them to be aware of especially when it comes to making internal decisions and providing useful feedback.

### **6.3 Information Sharing between Clinicians and Management**

The Management feel that clinicians do have an interest in costing information but that it is low down on their priority list.

*“I think there is more interest because we have been asked to present at one of their SMO [senior medical officers] meetings. It is probably not high on their priority though.” (Group Management 2)*

Although the management group think strongly that clinician feedback would be very helpful they struggle to get clinicians to engage with them.

*‘It would be better with their input. Take the annual plan, we ask all SMOs [senior medical officers] it’s very difficult to get to them. When we had our annual planning workshop I don’t think any arrived. So when you seek input it’s not often forthcoming. That said, working together is by far the best way to get something done. The more they can be involved the better. For those who want to engage (probably in the minority) there are opportunities to engage, but even then we are missing a bit. . . (Group Management 1)*

This lack of communication can lead to lack of understanding and therefore tension can arise between medical staff and management as medical staff have ways that they wish to do things which for cost reasons management struggles to accommodate and medical staff struggle to understand why.

*‘I kind of hear that it happens through other members of the executive team. That there is tension around “I’m only going to do this if you pay me overtime’ ‘I want to use this type of dressing’ etc. so yes there probably is a tension and I think what would help to ease that would be more honest communication around the reasons why, so they can see the impact. Because, particularly in health, if you need to spend money in one area generally it has got to come from somewhere else. (Group Management 1)*

Thus it appears there is a communication barrier that management are struggling to cross and this makes it difficult to give or receive feedback about costing information from clinicians.

## 6.4 Population Based Funding

The concept of PBF itself was considered to be fair. The idea of splitting the population into age, gender, ethnicity and deprivation were considered to be legitimate. *“I think it’s a good system. I think it’s very transparent and from that point of view very fair because everyone can see how it’s being calculated.”* (Group Management 1)

The overall impression of PBF at this level was not negative, however a certain amount of ambivalence or resignation about the system could be detected. *“It is what it is. I think it’s been around a while. Until they think of a better way of doing it.”* (Group Management 2)

The interviewees were well aware that there were flaws in the system and were able to pinpoint some themselves. One of the concerns was that, in a time of rapid population change, the population could get out of sync with the funding. Although it was admitted this was more of urban DHBs, such as Auckland, where the population was expanding far quicker.

*“It isn’t perfect in that, like now when we are in a time of rapid population change, it can get out of sync with the real population quite quickly. That doesn’t affect our DHB because we don’t have rapid expansion, but certainly the likes of Auckland and Wellington that are growing exponentially, that’s effectively a lot of money that is unfunded people.”* (Group Management 1)



However building, on that concern was the fact that any population growth that did occur in a small DHB, although potentially large for that DHB, was proportionally very small when compared to country wide growth, therefore the potential portion of available funding would potentially decrease. *“Even if we increase our population, but the increase is relatively small compared to say Auckland it means our portion may drop, so that’s a disadvantage.”* (Group Management 2)

When asked about adjusters in PBF the answers became vaguer. Although the general concept of adjusters was understood, the details were not well grasped. *“I understand the logic for them but I’m not close to the details of calculating them, so to be honest I just accept them.”* (Group Management 1). Interestingly, when asked their opinions on the adjusters in general both interviewees mentioned adjustment for the benefit of tertiary hospitals and did not comment on any adjustment that benefit small hospitals until prompted.

*“In terms of tertiary adjuster we use those tertiary services, so we’ve got to contribute something.”* (Group Management 2)

*“I’m not quite sure how they come up with the number but I’m fairly comfortable that a tertiary hospital should get additional funding for the capital, staff, etc. that aren’t required at a secondary hospital.”* (Group Management 1)

When prompted about adjusters that are aimed at solving diseconomies of scale for small hospitals, such as the rural adjuster, the opinion was more varied. Group Management 1 felt that the population was not big enough to be economical in terms of providing health care and did indeed suffer from diseconomies of scale, so they did quite well out of the rural adjuster. Although it was admitted that the interviewee had never looked into it too closely, there have been two reviews on the PBF system, the first of which the interviewee was quite involved in.

*“I know they’ve had two reviews since they first bought it in, the first of which I was quite involved in, so it’s been quite thoroughly evaluated and reviewed and I think they’ve made minor tweaks but on the whole when compared to other potential rationing systems it stands up quite well.”* (Group Management 1)

However, another interviewee (Group Management 2), while acknowledging the existence of diseconomies of scale and the benefit of a rural adjuster, felt that *“It all depends on how rural they define us to be.”* As far as rurality goes this particular DHB is not considered as rural as others, such as the South Island West Coast. It is physically close to highly populated areas with much larger DHB’s. Nevertheless, while the DHB was not particularly rural, there were certain geographical issues, such as mountain ranges, that made providing health care more costly and these were not taken into account under the rurality adjuster. This finding is in agreement with *Penno et al. (2013)* who discussed the adjuster for the cost of supplying health care being divided into rural and urban categories and general geographical information not being taken into account. This leads to potential instances where a DHB could not be particularly rural when it comes to population, but may have certain geography in the area that disproportionately increases transports costs, potentially leading to inaccurate funding apportionment.

In general, PBF seems to be seen as the best option that is currently available. Even at top level management, the understanding of PBF is quite basic, though this is unsurprising considering the complexity of the system and the lack of comprehensive information available on the subject. Despite this complexity and knowledge deficit, top administrative management are aware there are flaws, but they believe they have no option but to place their trust in the Ministry of Health to distribute funds in a fair and accurate manner. *“I assume that somewhere along the line someone is doing the right piece of work.”* (Group Management 1)

## 6.5 Common Costing Group and National Averages

In the past year the DHB hired a business analyst in order to reconnect with the Common Costing Group. One of the reasons for this was the fact that there was a lack of quality cost information being contributed to the Ministry and the Common Costing Group from small hospitals. PBF is based on national averages but it is highly likely that the national averages are distorted by having the majority of cost information contributors being either tertiary or large secondary DHBs. The unique circumstances faced by small DHBs tend to not be accurately represented in these national averages. The case DHB is attempting to change this as they recognise it as a flaw in the PBF system.

*“There is a lack of small DHB’s in terms of actually putting [detail] into the national figures so there is not that representation from a small DHB. That is why, in some ways, we’re engaging, because we want to get our information correct so we can participate.” (Group Management 2)*

However, this is a new development and the results of this endeavour have yet to be realised. Although the case DHB is moving toward more accurate and relevant cost reporting there are other associated issues. The first issue is that small DHB’s represent a very small part of the population so even if they do provide accurate and detailed cost reports, this information may not have any appreciable effect on the national averages.

*“In a perfect world we would all have a fantastic costing system and feed into one national system and we’d have these very accurate national prices. But I know that’s not the case, because I know with the national costing programme not all DHB’s submit data let alone the quality of the data they don’t submit anything. So what you’ve got in there is for example [Case DHB’s] data is only 1% of the population so our information is just a rounding error, so even if all our prices were half or double what everyone else’s were it doesn’t even measure on the national average, so that’s where I do have a bit of an issue.” (Group Management 1)*

In order for there to be any material change to the national averaged, small DHB’s would all have to contribute high level cost data, something a small hospital like the case hospital is currently unable to do. This is a prohibiting disincentive for small hospitals to invest in the kind of sophisticated cost systems and trained staff needed to generate this level of information as some could perceive that the funds could be better spent elsewhere.

*“It all depends if everybody is contributing, so if you are not getting a contribution from everybody the average is skewed. If not all the small hospitals are contributing into it, yet you’ve got all the big ones doing it, so it’s skewed.” (Group Management 1)*

## **6.6 Costing Feedback to District Health Board from the Ministry of Health**

At this time management gets very little feedback from the common costing group or the Ministry of Health on the reports that they generate. The Ministry of Health ensure that the reports generated reconcile with the DHB’s financials and report on where other DHBs are at in terms of report submission, but no comparative information is fed back, nor is there any feedback on the sent information. Analysis of the information in comparison to other DHBs would be extremely helpful in improving efficiency. Due to this lack, the case DHB pays a

subscription to Round Table which provides benchmarking information for hospitals here and in Australia. This information is used for increasing efficiency.

*“We get an update of national prices but it’s not benchmarked. It’s more the average price of this widget has changed by x% because of x, y and z, which is helpful, but doesn’t say anything about your hospital’s efficiency. We do get Health Round Table data that sends a lot of benchmarking information where they anonymise the other DHBs.”* (Group Management 1)

## **6.7 Inter-district Flow**

The IDF system is considered essential to a small DHB. They do not have the facilities or staff to be able to provide full treatment to all patients. The current IDF system is also very efficient with almost no transaction costs. *“It’s a beautifully designed system considering the amount of money changing hands.”* (Group Management 1)

The reported cost is pre-determined by national prices and no time is wasted in the process. However IDF is a rather painful subject for small DHBs. In theory this should not be the case. The national prices should be accurate and according to the PBF system DHB’s should be provided with enough funds to cover these costs without issue, however this does not seem to always be the case.

One of the issues that management has is the fact that IDFs must be paid at the full cost of the case weight. This does not take into account the costs that are already sunk into the DHB and will be incurred regardless of receiving a patient from another DHB or not. These kind of costs include admission and release costs, rehab costs and the costs of any corrective treatment they may need. This creates dissatisfaction as it is not believed to be the “true” cost of the treatment.

*“Say in our case we send out 65-70% of our stuff to [another DHB] and the fact that we pay full price for every case weight or outpatient appointment is to me not the real price [cost] because they’ve got pretty much fixed costs so to do another one is probably not costing them very much. And that is one of the anomalies of the system and we’ve tried several times to negotiate but they aren’t cooperative.” (Group Management 2)*

This full cost system greatly benefits the receiving DHB and is unbeneficial for the sending DHB. Small DHB’s are unlikely to receive patients through IDF, and due to not having the facilities often have to transfer their patients to larger DHBs. This creates a power imbalance. In the case DHB IDFs are responsible for over 22% of total expenditure for the hospital. Although negotiation is technically possible, in practice it does not work, due to the large differentiation in negotiating power between large and small DHBs. There is no price cap built into the IDF system and larger DHB’s are unlikely to agree to such an arrangement, because with limited resources and superior bargaining power, there is no incentive to lose potential ‘income’.

*“If we could negotiate it would be good because we are a price taker not a price setter so it makes it hard for small DHBs. If we get a big IDF it would be nice to be able to cap that. We can negotiate, but sometimes when we are dealing with a big player we can’t.” (Group Management 2)*

Due to this inability to cap costs or negotiate effectively, a particular case can throw the entire hospital’s budget out. Not only that, but it can raise huge ethical issues about how to best spend funds to provide health care. Do you spend hundreds of thousands on one child or do you take those resources and use them to treat many other patients. This is a particularly painful choice for those facing situations particular to a small DHB. The amount is firstly far more significant to a small DHB than it is to a much larger one. Secondly, hospital staff are societally far closer to their patients so these kinds of decisions do not only affect them ethically but socially as well. One such case was the case spoken of in the first set of interviews. Although this issue may seem to particularly effect medical staff and appear to be a more distant issue from management, the effects are still there as it is management who

enforce this difficult choice. This can be not only personally difficult but also creates conflict between management and medical staff, as will be further discussed in chapter 8.

*“We had a patient at StarShip that cost us \$1.2 million. We’ve tried to negotiate with Auckland to say the real cost of that can’t be anything like what you’re charging us just because you can, but that completely fell on deaf ears so we’ve had to pay it. That makes it very volatile in terms of financial management. If it weren’t for that one case we would be ahead of our budget. It raises huge ethical questions.” (Group Management 1)*

There also seems to be a measure of discontent toward the Ministry of Health due to a perceived lack of concern for small DHBs facing these problems. Due to the way PBF is set-up, it is considered that these kind of instances have been funded for.

*“The ministry know about this case very well but the way financial monitoring works is they look at the bottom line and go we don’t really care what else is happening. The ministry line is that you need to manage that and expect that it’s going to happen every now and then and budget accordingly which is impossible because it might not happen for 50 years or it might happen again next year.” (Group Management 1)*

Small DHBs already struggle to keep within budget. Setting aside a comparatively large sum of money for these kind of cases that may or may not happen is an ethical dilemma in itself. To leave funds like that lying inactive for a may never happen case when resources are so need to treat current patients and invest into the hospital resources is its own issue.

The general opinion within this group, on the role of the costing systems in the area of IDF is that Small DHBs are considered price takers and not price makers. They have very little bargaining power and so as useful or not useful as having more sophisticated costing information might be, it won’t have a significant effect on IDF prices for small hospitals. When the idea that costing information effects national IDF prices was brought up in the interview,

the reception was indifferent, as they felt that their small DHB could have little effect on these IDF prices by itself.

## **6.8 Summary**

In summary Group Management think that the current PBF and IDF systems are the best options that are currently available, but they are knowledgeable enough to know that there are flaws in these systems and that small hospitals are particularly disadvantaged. As for implementing a costing system with a greater level of sophistication, they are not positive about its benefits. One interviewee believes it would be a waste of resources while the other believes that there would currently be no point as they do not use their current system to its full potential as it is. Both feel that there should be more costing information provided by the Ministry of Health and that the communication, costing and funding information between management and clinicians is inadequate. In the next chapter the opinions of Group Management will be compared to the opinions of Group Hybrid.



## Chapter 7: Group Hybrid

### 7.1 Introduction

In this chapter the views and opinions of Group Hybrid, which is made up of personnel who have a medical background but also have an understanding of financial and accounting systems, is examined. Their views and opinions about the hospital's costing system and information feedback between management and medical personnel and management and the ministry, as well as their views on Population Based Funding (PBF) and Inter-district Flow (IDF) are summarised below.

### 7.2 Costing System

When first asked about the level of cost information that is recorded Group Hybrid stated that there was a lot of information recorded, perhaps more than they knew what to do with. They also thought that all the information that was recorded was necessary, if for no other reason than it was ministry policy that they had to record it.

*“All information is necessary – if you are playing the game you have to follow the rules. Healthcare is all about rules so when you get down to it, it is necessary.”* (Group Hybrid 2)

When asked for the detail that the costing system records for specific procedures in order to determine a level of sophistication, the main focus on recording for Group Hybrid at a procedural level was time, personnel involved and the specific treatment administered.

*“That is an incredibly difficult question to answer. We record all sorts of information around medical procedures. If you are thinking of different treatments, different operations, different admissions, there’s a whole reporting system that the ministry require, that we require and we are measured against a number of parameters such as length of stay number of procedures performed and cancer treatment times and all that sort of thing. So there is a big system of data collection around that.”* (Group Hybrid 1)

However when probed further the interviewees stated that there was no way to determine the cost by procedure as they did not record costs down to that level of detail.

*“You mean how do we cost the procedure? I suspect that the recording doesn’t get to that depth. I don’t think we take the recording down to that level of detail. Time certainly; time starting, time stopping and so forth is recorded. But each individual syringe and needle I don’t think we record. I may be wrong but I don’t think so.”* (Group Hybrid 1)

Group Hybrid did not think that providing more detail or having a more sophisticated costing system was a priority however. In fact there was even some resistance to the idea. *“We need more clarity but not at more cost. Don’t want a knock-on-effect which vastly increases cost of health care.”* (Group Hybrid 2). The difference in this opinion from that of Group Management’s is that Group Management admitted the use of more sophisticated costing information, but felt at this time, investing in a more sophisticated costing system would not guarantee additional benefits.

### 7.3 Information Sharing between Clinicians and Management

Group Hybrid did not have significant concerns about the efficiency of the recording of information. What was of concern was the interpreting of the information.

*“Measuring is easy, but the interpreting and understanding of the context is very complex.” (Group Hybrid 2)*

*“It’s not so much how much you record but what you do with it. I think our systems at the moment are not smart enough to be able to track what we do with it and what effect that has and so forth. That’s the main problem.” (Group Hybrid 1)*

It was felt that cost information was not presented in a way that was easy to interpret for those without specific financial skills.

*“Yes, I think we need that information to be presented in a useful and less time consuming manner. We would need someone with the skill to know what and how to present the information. An email with lots of Data is not useful.” (Group Hybrid 2)*

When talking about the feedback of costing and funding information to staff, it was agreed that staff got very little cost information and that they didn’t *“get enough feedback to enact improvement.”* (Group Hybrid 2). Group Hybrid considers a major reason for that is that medical staff do not have the financial training to be able to understand the cost information and so make little attempt to reach out themselves for this information.

*“Well they never turn up to meetings where this is discussed. You know there are various meetings where it’s available for discussion and when we do discuss it you just see people eyes glaze over. I don’t think it focusses largely on clinicians minds. It’s not what clinicians do. A lot of clinicians are quite financially illiterate which might surprise you but they are.”* (Group Hybrid 1)

In addition to this lack of understanding, there is also the fact that it takes medical personnel time and effort outside of their role as clinicians to access costing and funding information. The information is there, but it requires effort to attain and even if they do make that effort they may not necessarily be able to make use of it. *“As clinicians there is every opportunity to be involved, but it takes time and desire above your clinical role.”* (Group Hybrid 2)

Although it was agreed within Group Hybrid that very little costing information actually filters down to clinicians, the importance and impact they place on this lack of information does vary. The differences are around the conflict that this lack of dissemination of information triggers and the clinician’s role in creating more efficient resource use.

The first view point was that it did not create much tension because clinicians were not harassed about costs, but about performance, and that cost management only became a real issue in extenuating circumstances. When asked if tension arose between management and clinicians due to lack of understanding about costs, the answer was;

*“Not particularly because we are not pushing our cost barrel. We are not constantly saying ‘We’ve no money, we’ve no money, and you’ve got to stop doing things’.”*  
(Group Hybrid 1)

Circumstances when cost discussions became important were areas like when locums were invited to stay a couple of extra days when there was no need for them or when clinicians started to order expensive drugs that weren't usually ordered.

*"Sometimes a locum might be booked for 3 days and he comes and says he can stay for 5 and people say 'Yeah yeah stay for 5 have a day of doing paperwork' well actually that's not good stewardship of money." (Group Hybrid 1)*

*"If we get clinicians who start to order incredibly expensive drugs all of a sudden, we have a conversation about that. Is it appropriate, is it realistic, not to beat them up because it's expensive but really to work out why they are doing it and then is this going to be an ongoing trend and do we need to budget to buy these drugs because it's a reasonable thing to do. Or is there an alternative." (Group Hybrid 1)*

However outside of these areas the thought is that the patient treatment comes first and what has to be done has to be done. Clinicians must give the patient the treatment they need and money issues can be worked out afterwards by management.

*"But we are not constantly taking funding and money out of everybody to beat them up about it. What we beat them up about is clinical safety, clinical quality, how well we do look after people. And then around that we [being management] work the money as well." (Group Hybrid 1)*

The second view places more priority on clinicians' ability to use cost information and increase efficiency. The concern is that when it is interpreted, the numbers do not express the full context. The numbers generated could look bad for a department or even a specific medical staff member if the full context was not understood.

*“If you spend half an hour with a patient but another person spends 15 min with them the bare facts can look bad. But that half an hour may save hours down the line.”*

(Group Hybrid 2)

Any feedback about cost /money that was given to staff had to be given in a non-threatening manner that took full consideration of these kind of issues. They felt that feedback was all too often presented in a manner that would come across as threatening or judgmental to staff members and was not presented in a manner that they could understand and make use of. They felt that a clinician’s role needed to expand from purely clinical work and include the ability to make use of cost information. *“What needs to happen is that the expectation of the clinical role needs to, and has, changed to involve those factors”* (Group Hybrid 2). This is important because in the end many decisions are made by clinicians. What they need is to know what information they require and then management must provide them with this information in a manner that they can use.

*“I think that clinical services should decide what they need to know to be efficient and then should demand that from the system. That doesn’t actually happen though, why? Because each clinical service as an entity does not have an adequate identity. If you take paediatrics – do they know: what they need to do, what they need to do it, what they need to know to do it, and can they show they are achieving it? The organisation needs to supply them with the information they need for this. They need to have the information to know how to do that work better, but I don’t think that happens.”*

(Group Hybrid 2)

They were also adamant that there was conflict between management and medical personnel because of poor communication and feedback between the two groups. However, while Group Management were frustrated by the fact that there was little response to their efforts to share costing and funding information, Group Hybrid felt that they wouldn’t get a response

until they changed their method of disseminating the information and became more transparent.

The two views on costing information feedback and the role of clinicians in creating more efficient use of resources, while in the same group, give vastly different roles to clinicians when it comes to the potential for cost information usage. While the first opinion, that it is only important to share costing information in extenuating circumstances, is more in line with what actually happens, it is more extreme than the opinions of Group Management. Group Management, while they accept this situation is the current reality, do not discount the potential of medical staff to use the information, should the information somehow be communicated to them, and that the current situation is not ideal. It must, however, be considered that this first opinion of Group Hybrid comes from an individual who is widely considered by others to be very politically correct and someone who always 'tows the party line'. Hence this attitude may have coloured the impression he gave that costs are not considered when making decisions about patient care and so clinicians have little role to play in these matters. While the "patient care comes first" is a message that is repeated across all three groups, it was particularly emphasized by this individual.

The second view presented by Group Hybrid, that medical personnel should play an important role in cost management, but need to be informed in a way that they can understand and is not threatening, while not currently workable, is more in line with what the other groups have expressed the desire to be attained, that of cooperation between management and medical staff in order to make the best use of resources.

## 7.4 Population Based Funding

The perception of high level management of PBF is predominantly positive. *“PBF is good because it’s a fair and equitable way to distribute the funding envelope.”* (Group Hybrid 1). Interestingly this subject group seems to have a more positive opinion of PBF when compared to Group Management. A reason for this is because they have enough understanding of the PBF system to see how it is currently the best system available but do not have enough understanding of the system to be able to see where possible weaknesses may and do lie within the system. This lack of knowledge is recognised within this group.

*“[PBF is] good, maybe because I don’t know enough, but I can’t think of anything better. It takes account of age and social determinates. The method of distribution is sensible.”* (Group Hybrid 1)

However, they do show knowledge of potential weaknesses in alternative funding systems such as block funding (where a set amount of funding is given and hospitals can do what they want with it), and Activity Based Funding (where funding is based on activity levels). In particular, activity based funding causes worry as it creates a system where performing certain procedures becomes far more valuable to a hospital than others and the medical activity and procedures become carried out with extra funding in mind, rather than with a service mentality. PBF is held to be the best option they have available by both interviewees.

There seems to be a lot more trust in the PBF system in Group Hybrid than Group Management. *“PBF is good because it’s a fair and equitable way to distribute the funding envelope.”* (Group Hybrid 1). However, although the system is seen as fair there are some disadvantages that small hospitals face that larger ones do not. For example, a small hospital has a higher percentage of fixed costs and they have to outsource a many of their health care activities to larger hospitals through IDF. Therefore, providing health care is comparatively more expensive for smaller hospitals.



*“With a smaller DHB your fixed costs are a higher percentage of your total budget, so if you are running a hospital you have a whole load of fixed costs and you have to pay them no matter how much income you’ve got. This leaves you with less funding that you can work out what you want to do with. That’s a potential disadvantage.” (Group Hybrid 1)*

This problem is the reason why adjusters in the PBF become so important for small hospitals and why it is so important that they work correctly. Group Hybrid’s opinion of PBF adjusters is also more positive.

*“I think they work well. I think there is recognition that things like social economic status do make a difference and all the rest of it does affect the cost of providing a health service and I think a lot of work has been done on these adjusters over the years. I think they work well.” (Group Hybrid 1)*

They understand that the system is complicated and not perfect but the feeling is that New Zealand has developed their adjusters well, over a period of time and have a favourable impression of them. *“It’s a complicated formula but NZ has been at it for quite a while and has done it well.” (Group Hybrid 1)*

Group Hybrid also think that the New Zealand PBF system is more developed than the Australian systems. *“Australia, interestingly, is just starting to go down this path and they just can’t get their head around the adjusters and the arguments are back and forward.” (Group Hybrid 1)*

There is a certain level of pride and corresponding trust in the system, far more so than was shown by Group Management. They could pinpoint no areas where they felt that PBF had a weakness or could be improved, with the exception of the fact that small DHBs potentially

had a higher percentage of fixed costs, leaving a lower percentage of income that they can choose where to spend, as stated above.

Group Hybrid's more positive attitude toward PBF than Group Management, may well stem from a certain lack of detailed knowledge about the system. Seeing past the surface appearance of fairness and excellence and finding fault in a system requires a certain depth of knowledge, one which appears to be lacking in Group Hybrid. They may feel more positively toward PBF because they have less knowledge than Group Management.

## **7.5 Common Costing Group and National Averages**

Furthermore, Group Hybrid shows little to no knowledge about the common costing group and how national averages are determined. *"I don't even know who they are. What are they?"* (Group Hybrid 1). Once a brief explanation was given an attitude of indifference was shown. *"I thought that's what you were talking about. I have nothing to do with them. They do their stuff and we do ours."* (Group Hybrid 1)

When asked how the hospital fed costing information back to the Ministry of Health in order to calculate national averages, the answer was vague. *"Oh that's all in our reports. We report everything under the sun back to the ministry and then they analyse that and work it out."* (Group Hybrid 1)

They were unaware of any representation that may exist on the Common Costing Group for the DHB, nor of any way in which the hospital contributed to the group or the creation of national averages.

*“Oh look there is an invitation every week to join a group of some sort to provide representation. You could spend your life doing it and never do your daily job. It may be that one of the others is on the group, I don’t know but I expect not, it is a fairly specialised business, it’s not my area of speciality.”* (Group Hybrid 1)

They felt less of a need for small DHB’s to contribute costing information toward the Common Costing Group than Group Management. This was even though they had recognised the fact that overhead costs took up a greater percentage of their overheads and that providing a service could potentially be more costly for a small DHB. *“24 hour cover is a very expensive commodity, but we don’t have the staff, which makes it difficult.”* (Group Hybrid 2)

Both also had no idea how their costing information compared to other DHBs, nor did they seem to realise the extent to which costing information fed in from all DHBs played a role in determining national averages and the funding their DHB would get through PBF. Their focus was more internal than external. One interviewee (Group Hybrid 2) suggested it would be sufficient if a single small DHB was chosen to have a highly sophisticated costing system and represent other small DHBs on a national level with the costing information gathered.

On the whole Group Hybrid placed more trust in the PBF system than Group Management did. They were less informed on the potential short-falls of the current PBF system and so were more satisfied with the system.

## **7.6 Inter-District Flow**

Group Hybrid’s opinion on the IDF system was more positive than the opinion held by Group Management. While Group Management felt that the system had many flaws, they accepted

it as an efficient system that they could not really impact. Group Hybrid however, felt that it was a fair and necessary system, *“It’s sensible and logical. Patients need to go for more specialised care and that is more expensive.”* (Group Hybrid 2). They were much less aware of the flaws in the IDF system and were not as cognisant of the role that costing information played in determining national prices as Group Management.

*“Well I don’t know that I would acknowledge that there is a problem. I mean the difficulty with IDF is just not knowing what the sum will be. When preparing our budget it’s very nice to look at such costs as what our rent is going to be and be able to work it nicely into the budget, but IDFs are so variable, as we found out recently.”* (Group Hybrid 1)

While it was acknowledged that being able to negotiate and place caps on IDFs with other DHBs would be beneficial, Group Hybrid felt that it really wasn’t worth it and that nobody would have the energy or enthusiasm to even attempt it, given that the DHB had no bargaining power when negotiating with larger DHBs.

*“We just use the national prices. Here we would need to negotiate with at least 3 DHBs and that’s a lot of negotiation. Theoretically there are advantages in that it caps the budget. But it caps their income as well so you’ve got to find a fair figure and the historical figures are relatively predictable apart from the one-offs. But I don’t know that anyone has got the enthusiasm.”* (Group Hybrid 1)

A concern about IDF that had been raised by a clinician previously was that, when a patient is transferred to another DHB, they may not undergo the full treatment at that DHB but are transferred back for part of their treatment. However, the full cost of that treatment according to the IDF system is paid so the hospital is paying twice. When asked about this there was not much concern.

*“[The DHB] uses National Costing. What does this include? Well for example national costs may include a 7 day stay but the patient may only stay form 3 days we must pay the full amount this seems bad but this method is cheap to administer. Once you get more complicated it gets more costly.”* (Group Hybrid 2)

*“There are some little bits round the edges which people grumble about but I think there are swing and roundabouts to it all and I think overall the results are probably reasonably fair.”* (Group Hybrid 1)

Group Hybrid sees IDFs as necessary and the current system as efficient and fair. They see little that needs to be changed in the system as doing so would increase complexity and costs without bringing enough benefits. It is a system that ‘just is’ and doesn’t need to change in any substantial way.

*“The idea that money determines how well we look after a patient is not correct in that way. We look after patients based on their need and we have to work out the money afterwards. Most clinicians probably have no idea about IDFs and what they cost.”*  
(Group Hybrid 1)

This opinion has a lot to do with the situation of the DHB which is small and has to transfer a large percentage of their patients out of the DHB due to their limited ability to offer a full range of health services.

*“It’s more of a problem for us financially because we are limited in the services we provide here and so our IDF budget is correspondingly pretty high, roughly 30 mill out of 140 mill. That’s quite a lot of money.”* (Group Hybrid 1)

IDF's account for up to a third of total costs and the DHB has to cooperate with at least three other DHB's at any one time. This makes it unfeasible to set up contracts and price caps so having national prices for IDF's is essential for this DHB. The fact that they think more positively about the system than Group Management is because they realise the absolute necessity for national prices but do not understand the potential flaws in calculating these national prices and how it can particularly effect small DHBs. This is because their fundamental expertise is in the medical field and they do not have the financial and accounting knowledge to understand these issues in-depth.

## **7.7 Summary**

In summary, Group Hybrid was able to offer more constructive reasoning as to why Group Management's attempts to communicate costing and funding information to medical personnel was not successful. They saw less benefit in having more sophisticated costing information than Group Management, however both groups agreed that at this point in time investing into a more sophisticated system would not be beneficial. Because of their more superficial knowledge of costing and funding systems Group Hybrid saw PBF in a more positive light than Group Management, and saw IDF in a more positive light than Group Management. In the next chapter the opinions of Group Medical will be compared to the opinions of Group Hybrid and Group Management.

## **Chapter 8: Group Medical and a Comparison to Group Management and Group Hybrid**

### **8.1 Introduction**

In this chapter the views and opinions of Group Medical, which is made up of personnel with a purely medical background, are examined. Their views and opinions about the hospital's costing system and information feedback between management and medical personnel and management and the ministry, as well as their views on Population Based Funding (PBF) and Inter-district Flow (IDF) are summarised below. Further, these are compared to the views of Group Management and Group Hybrid.

### **8.2 Costing System**

Over the course of this research it became apparent that within the group of purely medical staff itself there are clinicians who take interest in financial matters and try to inform themselves and those who have no interest at all. The medical staff that were chosen as interview subjects for Group Medical are in the position of having to make use of financial and costing information, but have very different levels of experience in the area. Group Medical 1 has been the head of their department for some time, so is at least aware of many financial issues, while Group Medical 2, while not new to the DHB, has only been at their new post for a month at the time of the interviews and so is generally less informed. This makes for an interesting contrast between the two with both still remaining within the parameters of Group Medical.

Medical staff know very little about how the costing system actually works. The recording they do is patient oriented and it is mainly for patient history purposes as well as medical-legal purposes.

*“The operation record doesn’t record any of that. You record what prosthesis you use, you record the fact that you’ve given antibiotics or that you’ve given the patients anticoagulants afterwards, but none of that’s in terms of cost, it’s in terms of what the patient has actually been given. It’s details of how you’ve managed the patient, so things like the type of anaesthetic given, the position of the patient, the surgical approach, the prosthesis employed, any issues that occurred, the wound closure, the dressing used and post-operative management in terms of mobilisation, antibiotics, anticoagulants and, that type of thing. But in terms of the level of detail involving, say, bandages or theatre sheets used, no.” (Group Medical 1)*

Not only that, there is a certain level of disassociation from record keeping that does not directly affect the patient, and clinicians seem to have little concept of how costs are calculated for the treatments they provide.

*“The drugs are managed and audited through the pharmacy, so that is how that is worked out so we don’t have a lot to do with that. In regards to the stores we have a certain number of specific equipment and the stores manages that. From our perspective it’s all on IMPRESS<sup>4</sup> and it just happens and we don’t keep an absolute tally, it’s more their job to do that.” (Group Medical 2)*

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<sup>4</sup> IMPRESS is an ‘instrument management system’ and is used to manage and monitor the use of medical equipment.



The concept of utilising a more sophisticated costing system did not really register with medical staff. They are far more concerned with receiving costing information in the first place.

### **8.3 Information Sharing between Clinicians and Management**

The management group and hybrid group acknowledge the role that clinicians have to potentially play in creating a more efficient use of resources. This was acknowledged by both interviewees of Group Medical, but both claimed they had no access to any costing information. When asked what feedback they received from management on costs the answer was:

*“None at all.”* (Group Medical 1); and

*“No, I think the answer would be. I’m quite in the dark in regards to the cost of things in all honesty.”* (Group Medical 2)

The management group and hybrid group acknowledged that very little costing information trickled down to the medical group, certainly not enough to enact change. However, all three groups offered varying reasons why this was the case. The management group felt that medical staff were not interested and though they tried to hold meetings and workshops it was nearly impossible for them to get medical staff to attend.

Group Hybrid also felt that meetings and information were available, but the reason medical staff were not interested in attending was that many clinicians were financially illiterate and could not make use of the information. As well, attending these events was a lot of effort that was over and above their clinical role.

However, the medical group interviewees both had specific areas where they felt costing information would be useful. This was directly related to their positions and departments. The tension occurred when management failed to provide specific costing information that they requested or could find a use for.

*“I’ve asked so many times for information but there is just no information. Things like drape packs, when you do surgery you drape the patient up with sterile drapes and these come in big packs and there are different sorts of packs, different companies’ packs and the DHB can’t provide us any information on what the cost of these packs are, what the relative costs with other companies are, they’ve got no idea.” (Group Medical 1)*

The comments by Group Medical lent credence to the thoughts brought up by Group Hybrid 2 where he felt that disseminating costing information to clinicians was important and the way to do this was for clinicians to know and communicate what information they needed and for management to then be responsible for providing that information in an easy to understand and non-threatening manner.

As far as responding to any feedback that clinicians give to the other groups, the medical group seem to feel that either their feedback is not taken into account or, when it is, it is because there is some kind of problem that has occurred and so management have to take note. When asked if it was felt that management received and acted upon any feedback the answer was:

*“Don’t know if I can answer that, but I think it would be listened to because they would, I presume, have to answer to someone else, so they need that info.” (Group Medical 2)*

This response seems to suggest that the medical group feel that their feedback is often only absorbed by management when a problem for which they are accountable occurs. This is in direct contrast with what Group Management were talking about when they felt that it would be beneficial to get feedback from clinicians, but it was hard to get them to engage.

As discussed earlier, there are probable reasons that medical staff are unwilling to go out of their way to meet management and exchange information. When the three DHB's were combined, medical staff had no access to management. The distance created between management and clinicians, means that even now many clinicians feel their opinions are not considered by management. This mind set has also been strengthened by instances, as told in chapter 5, where their opinions have not been taken into account. This is not something that can be immediately remedied and will take time and effort to rectify.

When asked about whether the situation had improved since the DHB's had split up again, and the case DHB had got its own management back, the answer was that it had improved, but it would still be some time before management, and the institutional norms and values that they worked within, would be stable.

*“Well we were all really happy, but it [subsequent split of the 3 DHB's] meant that we were financially worse off. It meant restarting with an entirely new administration and that new administration is still finding its feet and it's still in a state of flux. I can't tell you because it's going to be another two or three years until there's some stability back. All institutional memory was deleted.” (Group Medical 1)*

However at this present time there is very little communication and feedback between management and medical staff. All three groups agree that there are tensions between medical staff and management and one of the big reasons for this is lack of communication and dissemination of information.

*“I think wherever there is tension, and there is tension often, it’s usually filters down to communication and the lack of. Whether it’s about costing I don’t know but it’s certainly a lack of understanding of each other’s perspective and no middle ground for meeting.”* (Group Medical 2)

Though Group Management and Group Hybrid state that there are many opportunities to meet with and communicate with each other, they still struggle to receive the participation of Group Medical. However, as stated before, attending these meetings and finding this information is work that is over and above Group Medical’s jobs as clinicians, and whether or not there is an incentive for them to do so, considering the lack of faith in management that exists, is debatable.

In contrast, Group Management feel that there is incentive, as communication between management and medical staff is considered to be an important way of improving efficiency in managing resources. Group Hybrid agree that communication improves efficiency and spending with the incentive for medical staff is to be able to *“do a better job”* (Group Hybrid 2). It should be considered more a duty to their patients and the hospital.

However, Group Medical, while feeling that communication of costing and funding information is an important issue, believe that it is in fact not a productive use of their time to attend these meetings as there is a pervading feeling that even if they attend, their views and opinions will have little effect. Not only that, but they are not given the information they need in a form they can use, nor any incentives to cut costs.

*“There is no incentive for us to cut costs at all. We try to act responsibly in that orthopaedics has very expensive prosthesis, by using stuff that’s as cheap as we can, but at the same time has a track record that means it’s not offering a long term cost.”*  
(Group Medical 1)

Furthermore the incentive as seen by management to manage resources more efficiently is not necessarily something that conforms to Group Medical's institution of being patient focused. With no incentive to cut costs and the lack of trust in management they are often incentivised to create more costs. An example of that would be in regards to equipment.

*"I've been here 18 years and every year management has come to us and said 'We are short of money this year you've got to come up with ways to save money' and there's always a tension there. Capital expenditure is always an area of tension. There's no money for capital expenditure on anything. I've still got things that I put on the capital expenditure list in 1999 ticking over waiting for them to say we've got enough money to buy it."* (Group Medical 1)

Group Medical is well aware that there is a limited budget and that if money is spent in one place it can't be spent in another. This makes it a fight for resources between departments and tension results when their application for funds fails. One interviewee suggested that it would be a great incentive that if a specific department was able to come up with a way to cut costs then they would be allowed to invest that money back into their own departments. Without this, the benefits of any saving of costs cannot be seen by them in their own departments. The mentality is, 'why should I use something less expensive if I can't see any benefit to my department.'

## **8.4 Inter-District Flow**

As previously discussed in chapter 6, small hospitals face particular challenges when it comes to IDF. This particular DHB is a very small DHB, thus there are many services that they are not capable of providing. Therefore, they regularly send their patients to larger DHBs for

treatments. The IDFs are second only to salaries and wages in costs to the hospital. (Group Management 1).

While Group Management and Group Hybrid both acknowledge the necessity of the IDF system, they are well aware of its flaws. (Group Management more so than Group Hybrid). In general Group Management feel the system is incredibly efficient and the mechanics of the system make transactions fast and efficient. They believe that the actual system of costing these transferred treatments, however, leave small hospitals at a distinct disadvantage financially.

Group Hybrid are less aware of the drawbacks, however they understand the efficiency and necessity of the system. They are less inclined towards the idea of investing in a more sophisticated costing system as a mechanism toward correcting the inequalities faced by smaller hospitals.

Medical staff, on the other hand, are split in attitude depending on their knowledge of the system. When hardly anything is known about the mechanics of the system and the disadvantages faced by small hospitals, IDF is merely viewed as a method to get the patients the care they need. In fact it is even viewed in a positive light. When a patient is transferred to a larger facility there is a potential for faster and more efficient care. Moreover, waiting lists can be much shorter than those that a small hospital is forced to put their patients on, due to a lack of facilities and staff.

*“If you have your heart attack over there you are going to go straight in, you are going to have your cath lab, have you blockage rectified, but if you are here and you walk in the front door there isn’t actually a guarantee that you are going to receive that absolute treatment. You may receive medication instead and then sit here for a few days while you wait to be transferred to that service. So there is that discrepancy. They*

*are actively working on it but half of our patients in HDU are cardiac patients who are waiting for angiography.” (Group Medical 2)*

These waiting lists can be highly demoralising to clinicians as limited resources means stricter regulations on who gets treatment priority. In small hospitals it is far more common for clinicians to have intimate knowledge of their patients’ circumstances and be more emotionally invested. For a clinician who goes to church every Sunday with a patient whose business is failing because they can’t get a hip replacement, the emotional stress can be huge. To these clinicians IDF can be an opportunity to get more patients the care they need. When asked whether higher treatment costs of IDF creates tension, the answer was:

*“Not really because it is very much a clinical decision. There is a little bit of managerial, financial stuff there but at the end of the day it is always what is in the patient’s best interest. And we push as hard as we can push that our patients get as good care as possible from other services.” (Group Medical 2)*

However due to reasons that will be explained subsequently, this notion of the IDF system not creating conflict is incorrect. It is possible that conflict between such medical staff and management does in fact exist, but is incorrectly attributed to other reasons by the medical staff. An example of where this can happen is when an unexpectedly large IDF cost is incurred (such as spending nearly \$1 000 000 on keeping a baby on a ventilator). This kind of cost cannot be easily absorbed by a small DHB and so funds that were originally promised elsewhere must be taken to cover the unexpected cost. Medical staff become angry when what they were promised is not provided and because of their good impression of the IDF system, they direct their dissatisfaction instead toward management.

Although this is an extreme example, more subtle versions of this are constantly occurring. In fact the dissatisfaction that arises in this portion of medical staff has the potential to create

more conflict between medical staff and management than the group that has the worst impression of the IDF system.

In general, the group that displays the most dissatisfaction with the costing system is Group Medical, or more specifically, those clinicians within Group Medical that have some understanding of the mechanics of the IDF system, though they are not as knowledgeable as those in Group Hybrid. These clinicians can see many of the problems with the IDF system but are not knowledgeable enough to see the efficiencies, and, why it would be very difficult to change the system. They are fully aware that IDFs can be a big problem for smaller DHBs especially as they are more reliant on them than large urban DHBs.

*“We are a very small DHB and we are geographically quite spread out. You could argue that we are appropriately funded for those challenging demographics but I still think that we are at a huge disadvantage because of our IDF situation.” (Clinician X3)*

The larger DHBs are also under cost constraints so they charge as much as possible when it comes to IDFs to alleviate their own financial situations.

*“I think it’s becoming almost cannibalistic in a sense, what the DHBs are charging each other because they also have budget deficits and they need to rake in as much revenue as they can.” (Clinician X2)*

The hospital obviously budgets for these IDF payments and normally it is a reasonably predictable budget. However you can get a one-off event that throws the entire budget out. An example of this would be to have an extremely sick patient that needs to enter the intensive care unit, within another DHB, and be put on a ventilator for a protracted period of time.



*“Suddenly we are a million dollars down that we had no visibility, no way of predicting, and we’ve got no safety net whereby we can go to the ministry and say this is an exceptional event. We need exceptional funding!” (Clinician X3)*

This is particularly troubling for small hospitals because these outlier amounts are so significant to them. As interviewee (Group Hybrid 1) so aptly put it, for a big urban hospital a million dollars is a sneeze, but for a small rural hospital is a full blown case of pneumonia. It is a lot of money that has not been budgeted for and so has to come out of somewhere else. This is where frustration comes in for medical personnel. It is very frustrating and aggravating when there are things the hospital really needs but there is just no money to afford them.

What is more, something anticipated and needed may have been given the green light and suddenly the money is no longer there. This can create conflict between medical staff and management and can cause the medical staff to see the costing system and management as lacking legitimacy. It is here that the misplaced conflict previously mentioned occurs. Many medical staff have no idea about the technicalities of the IDF system and how little control management have over the costs involved or how difficult it is to plan for these outliers.

Therefore the dissatisfaction they feel is placed on the shoulders of management and not on the IDF system itself. Though it is clinicians with more information that disapprove of the IDF system the most, they have more of a sense that the blame cannot lie solely with management and so this dissatisfaction is aimed outside the hospital rather than within.

In a similar vein, there was a lot of dissatisfaction about how the DHB that the patient is transferred to gets paid a set amount for a specific treatment even if some of the treatment actually occurs in the transferring DHB. This causes a lot of frustration.

*“I think that IDF is one of the biggest issues for DHB’s. It’s extremely costly for us. Some other DHBs use it as a good source of income and from our point of view it’s quite unfair. Say we get someone with a nasty fracture and a chest injury that we scrapped up and sent to [the receiving DHB]. They’ll get initial stuff done down there then they’ll be sent back here for the rest of their care but [the receiving DHB] gets the full IDF for it. And they might spend three or four days in [the receiving DHB] and three weeks here but [the receiving DHB] gets the money.*

*For example a chest injury from a car crash, we don’t have a chest unit here so they go to [the receiving DHB], they get their chest managed, they get their femur put together initially and then they come back and we’ve got to do something else for their femur later on. Management tell me we don’t get any money for that. We don’t get any money for the period they go to rehab to get them back on their feet. So [the sending DHB] is seen as a sort of cash cow.” (Group Medical 1)*

While Group Management and Group Hybrid lean toward accepting that this is the price they have to pay for simple transactions that cost almost nothing in terms of time, negotiation and manpower, clinicians are not happy about the system.

There are further issues associated with IDFs, other than unexpected one-off events. Interviewees were asked if they ever found that larger DHBs prescribed treatments that the clinician from the small DHB saw as unnecessary costly. One of the most common areas that clinicians feel that DHB provide unnecessary treatment is in the area of cancer treatment. The New Zealand population is aging and people living long enough to die of cancer is becoming increasingly common. Cancer drugs are becoming more and more readily available and clinicians are prescribing cancer drugs more often because, along with their availability, they are also becoming more palatable and less toxic to patients.

However, these drugs are exorbitantly expensive especially for smaller DHBs. Perhaps unsurprisingly, this becomes an ethical issue. While a large DHB might not feel financially

pressured when providing these expensive drugs, a smaller DHB will be. When the drugs are being administered to an elderly patient with no hope of recovery, it is highly likely that a clinician from the smaller DHB would prefer to prescribe palliative care, working toward quality of life rather than quantity of life and at the same time, putting valuable resources to use where they could be more effective.

*“There’s a real value judgment about what the right thing to do is, because probably the drug is not going to make any difference to an eighty six year old and it’s probably going to make them feel terrible. There are a lot of arguments for quality of life rather than quantity of life, but we are living in a medical culture that has been going to the quantity side and seems to have lost sight of the quality one. And that’s a real cost issue when you think, that cost us two million dollars and we could have done this for all those people if we had that money.” (Clinician X2)*

However, this problem can be mitigated, to a large degree, if clinicians in the two participatory DHBs have good professional relationships and communicate with each other.

Keeping track of patients and ensuring that they are returned to their resident DHB as soon as possible is very important because it is a more cost efficient way (to the whole health system) to have the patients in their local DHB. But, this is an area where exploitation can occur. A clear example of this occurred in the case study hospital not that long ago. In New Zealand it is common practice for many doctors to do both private and public practice. One such doctor located in the large urban DHB was privately seeing patients. These patients were members of the population of the smaller rural DHB.

The doctor was seeing them privately and then putting them on his public operating waiting list for minor procedures that the rural DHB could easily have taken care of. These patients were using him to cut the waiting list, which is unethical, especially considering the wait times that many New Zealanders are facing at the moment.

Not only that, but, their procedures were being charged to the rural DHB at what equated to a higher than standard price. This also meant that people who needed the procedures far more were being denied. If management do not carefully follow up and prevent such cases it can create severe dissatisfaction among clinicians.

Although the IDF system is an externally imposed system that is outside the control of local management, it is still an area where tension rises between management and clinicians. It is possible that with more a sophisticated costing system IDF costs could be broken down further and more accurate standards could be produced, mitigating some of these issues.

## **8.5 Population Based Funding**

The PBF funding scheme it is inextricably linked to the costing system and is based on a formula (Chapter 2). The PBF formula is designed to work out the estimated cost of providing health care to a certain DHB. Once the cost is estimated, only then will the funding to match that cost be distributed. This is why it is so important for medical personnel to agree with how the costs are worked out. If they do not find the PBF formula accurate or legitimate, then there is likely to be resentment as the funds they can use are directly tied to this estimated cost.

There was a difference of opinion on PBF between Group Medical and the other two groups. The management group feel that the PBF system is a good system, or at least the best system that is available at the moment. However, they do see that there are many areas where a small hospital is at a disadvantage when compared to large DHBs. With far more costing information available to large DHB's there is a certain ability to manipulate a PBF system that relies on costing information in order to distribute funds. This is something that small DHBs are unable to replicate with their less sophisticated costing systems. Group Management feels

a certain degree of ambivalence toward the PBF system as they see no alternative to it, and, no way to change it.

Group Hybrid understand less about the intricacies of the PBF system as their knowledge is not as in depth. Their opinion of the system is better than the Group Management as a surface look at the PBF system leaves a good impression. Group Hybrid are happy with the system and perceive it to be a fair and good system, far in a way preferable to other systems such as Block Funding and Activity Based Funding.

*“New Zealand has good costing systems. Number one is the DHB system and the whole model of PBF. The funding that each DHB receives represents a fair slice of the cake for the population that the DHB has to look after. Fundamentally the costing system is just and fair. It is a much better system than activity based funding, which is the more you do the more money you get, because then some people do lots and hog all the money and others miss out.” (Clinician X3)*

Group Medical has a range of knowledge about the PBF system ranging from nothing at all to basic knowledge. Those who know nothing about how the system works have no opinion on the matter other than expressing a desire to be more informed about the subject. The lack of information means that they don't understand the system and its bias toward large hospitals. Because they cannot understand the PBF system's faults, the dissatisfaction that has its roots in the PBF system and should have originally been blamed on the PBF system instead is blamed on management.

Although with the PBF system the hospital has some autonomy to spend the money in the most efficient way they see fit, there are certain benchmarks that the hospital must meet. These benchmarks are calculated to conform to the funding that the hospital receives and do not always take into account the unique situations of the hospital, particularly in the case of the small hospital. This is where the tension arises.

An example of this is where clinicians have to perform a certain number of elective surgeries to meet the requirements of the Ministry of Health, but any emergency procedures of the

same nature that they must perform are not counted toward their elective target. This can leave a small hospital in a difficult position as they are forced to perform more of a certain kind of surgery than they may have budgeted for in order to meet their elective targets. This is to the detriment of other possible treatments that the funds could have been used for.

*“The problem with the public costing system is that it’s not as palpable as the private system. We don’t really get told that we’ve got x amount of money to spend on say joint replacements this year. All we know is that the Ministry of Health expects us to provide hip replacement within a waiting time of three months. If we don’t meet those targets we get charged punitive penalties. There are some DHB’s that in order to keep up with their targets have to sub-contract their surgeries to places such as private hospitals.”* (Clinician X4 – could also be categorised as Group Medical)

This elective surgery target issue is an example of an area where there is dissatisfaction that is not linked directly to the PBF system in many clinicians’ minds. When clinicians do not understand the reasons for issues they view as illogical it is easy for them to turn their unhappiness onto management.

Other clinicians do have some understanding of the PBF system, though the knowledge is at a surface level.

*“I know we get a base amount and then there’s a fiddle factor for Maori, low socio economic groups, age of population and so on.”* (Group Medical 1)

This sub-group feels that there is an appearance of fairness, but in actual fact, diseconomies of scale make it an unfair system for small hospitals.

*“Big institutions have the ability to absorb that and they have the economy of scale. We have the diseconomy of scale. We’ve got to have an Accident Compensation Corporation (ACC) officer, we’ve got to have those sorts of people whereas [larger DHB] has exactly the same number of people for the same job.” (Group Medical 1)*

Although they understand economies of scale, Group Medical are not really aware of the adjusters set into the PBF system that are already designed to combat this issue (though how well they actually achieve this is unknown to this research). When asked about the adjusters the answer was;

*“I knew there was a rural adjuster, but it’s only a trivial amount. I don’t know about the others.” (Group Medical 1)*

One of the biggest concerns that this group seemed to have was economies of scale management. The apprehension was that both small and large hospitals needed to generate large amounts of information for PBF for the Ministry of Health. Whether the hospital is large or small they still need the same qualified staff in order to generate this information which makes management more expensive for smaller hospitals and cuts into their clinical resources.

*“Whilst in theory it seems like a fair system, there are some fairly significant downsides to it in that every hospital has to provide a certain amount of information to the government and there’s a huge number of staff required to produce that information for the government. That number of staff doesn’t vary much from a small hospital to a large hospital, so our management costs are much higher than our PBF suggests they should be. That has to then come out of the clinical budget rather than the management type budget.” (Group Medical 1)*

Medical personnel perceive the hospital as having an overly bloated management and administration department and this limits funds available to their own departments. This has the potential to create tension between them and management, even if they know that it is a situation forced on the hospital.

When clinicians perceive that management is bloated and overstaffed while they struggle to get certain resources and staff, it creates resentment no matter the cause. There can be tension even if there is knowledge, however knowledge does have the potential to limit the amount of tension. But this highlights the difficulty of increasing the sophistication of the costing system even if it could provide long term benefits. Not only is cost an issue, but clinicians can be sensitive to having a large number of non-clinical staff whose jobs they do not understand and cannot see the value of. Not only that, but, tensions arising from other accounting areas identified previously makes this a very difficult issue to remedy.

## **8.6 Summary**

By comparing all three groups, the reasons for tension and institutional conflict start to become clear. Different perceptions of legitimacy in the costing and funding systems can cause conflict whether the systems are perceived to have either too much or too little legitimacy (This concept will be discussed further in the next chapter). Due to a lack of communication and differing institutional perceptions, conflict and tensions arise. At this point in time all three groups believe that investing into a more sophisticated costing system would be a waste of resources. Whether or not this belief is accurate or not would take further research. The following chapter discusses the core problems that became apparent from the analysis in the last four chapters and suggests some potential solutions.



## Chapter 9: Discussion and Conclusion

### 9.1 Introduction

There is tension within this DHB between management and medical staff. Public Health is one of New Zealand's biggest spending areas. The demand for and expectation of quality treatment within New Zealand is increasing but resources remain limited. The efficient use of resources in this area is vital. Although small hospitals are often neglected in this area of research and to a certain extent in policy making, small hospitals are actually where attention is most needed. The reason for this is that small DHBs are proportionately more expensive to maintain than large DHBs and both management and clinical personnel are faced with unique challenges and stresses which are not found in large DHBs.

In order for the efficient use of resources it is necessary for clinicians and management to communicate and cooperate. Finding answers as to where and why communication fails and why tension rises between these two groups has the potential to improve these areas, create a more satisfying and congenial work environment, leading to more efficient use of resources. In order to do this, this research used institutional theory to divide hospital staff into two competing institutions, that of management, whom focus on costs and managing limited resources within the confines set by the Ministry of Health, and that of clinicians, who focus on patient welfare above all.

It is easy to see where these two institutions clash and create tensions, especially in the area of costing systems and funding models. The objective of this research was to use institutional theory to compare the perceptions of the hospital staff within these two institutions who have different underlying norms and values, in order to discover the specific reasons for the tension created. This research found three main reasons for the conflict and tension identified

between management and medical staff within the four conflict themes (as found in chapter 4.7):

1. Ineffective communication;
2. Lack of trust in management; and
3. The costing and funding systems themselves.

Though the issues found in this research are in no way exhaustive they can provide a starting point for the improvement of these relationships, and for future research.

## **9.2 Ineffective Communication**

As explained above, clinicians and management unavoidably interpret information and act within different group institutional values and norms. In the business world these different institutions are normally seen as a problem that can only bring tension and conflict, and it is clear from the results presented here that this is indeed observed within the case hospital. However, in contrast to for profit organisations, hospitals are required to break even while providing a satisfactory service. For this reason trying to force a single standard set of institutional norms and values onto a public hospital is impractical and in fact unnecessary and detrimental.

Within a hospital, both medical and management institutions can be considered necessary and invaluable. Financial, human and physical resources are limited and the efficient use of them is essential to allowing the hospital to continue to provide effective health care. It is only natural that this is the domain and priority of management, especially in small hospitals where resource use is already less efficient than that of large hospitals. This emphasis on cost control is essential for the sustainability of the hospital and the whole health care sector.

Furthermore management has many responsibilities that are externally imposed by the Ministry of Health which must be met, including the monitoring of funding utilisation, the standardisation of best practise and procedures and the protection of patients and staff alike.

However, the focus on cost and efficient resource utilisation cannot, and should not, be the priority of the clinicians themselves. Patient care and wellbeing as a priority is at the very core of a clinician's ethical and professional prerogative and it should be management's job to enable and support clinicians through, among other things, efficient use of resources. Therefore, having two competing institutions is unavoidable.

But the fact remains that these competing institutions create tensions and conflicts which are difficult to manage. This makes communication between management and clinicians especially important. With proper communication and cooperation the two competing institutions of both groups can be blended and ideally complement each other rather than create conflict. The potential of this can be seen in the third group that was identified from the analysis of the results, the hybrid group. Although this group lacked the detailed understanding of financial matters that the management group had, it still showed that having clinicians that were better informed about financial matters allowed for a better comprehension and cooperation between the two groups (management and medical).

The hybrid group was more understanding of the positions of the other two groups' norms and values (institutions) and hence were in general more inclined to cooperate with management. Despite this, they still placed patients over costs (as per section 3.3). Therefore increasing the communication and knowledge sharing between the management and clinicians may allow the two competing institutions to exist in a balanced manner (Group Hybrid).

However the nature of the information that must be exchanged, makes good communication difficult. Clinicians do not have the skill set to understand complicated financial information

and can feel inundated and even threatened the few times they do receive information. At the same time, management are absent from the day to day activities of the clinicians and do not always understand the exact situations and circumstances that clinicians have to deal with. This means that even if there is a willingness to communicate more, as seems to be the case, this isn't always well received by clinicians or useful to them.

There are two areas that were revealed in this research that could help improve the effectiveness of communication; training or education, and the communication of costing information. These relate to the areas of simplifying costing information and narrowing it down to only what is useful to those receiving it and the education of clinicians in regards to costing and funding issues.

### **9.2.1 Simplifying Costing information**

Ideally, costing and funding information should be presented to clinicians in a manner that they can not only understand but also meaningfully apply. Although there should be transparency between clinicians and management, priority should be placed on the sharing of information that clinicians can make use of. This is not a simple matter, as management is not always in the position to know what kind of information clinicians would find most useful. Clinicians need to be able to communicate to management what information they need and then have it provided to them. Different departments of the hospital will require different information and it is suggested that each department be able to request for themselves the information they need.

As clinicians will not always be aware of what information is available this is just a starting point. There needs to be a permanent communication channel between management and medical staff that allows clinicians to request certain information as well as be informed about

additional information that they might find useful. Having access to requested information when it is needed will also serve to reduce dissatisfaction with management as well as enable better cooperation between management and clinicians.

However, as stated previously, clinicians are not always in the position where they can make use of complicated financial information, so the presentation of the information is important. Such information needs to be explained and presented in such a way that clinicians can not only understand it but the information is also non-threatening to them. As shown in the results, figures can be presented in a way that does not take into account a department or individual's specific circumstances.

For example, in the case hospital Emergency Department (ED) clinicians are expected to meet certain time requirements when processing patients. Nevertheless, due to the nature of documentation at the hospital, many times the only patient notes that doctors from different departments have to rely on when processing those patients are the notes made by the ED doctors. Therefore taking detailed and hence time consuming notes are essential to providing effective health care to the patient. When circumstances, such as in this example, are not taken into account when analysing the costing information that has been collected, it can reflect badly on the clinicians and make them feel that management does not know nor care about the circumstances that they must work in. It is useful for such circumstances to be taken into account when presenting clinicians with information, as well as when analysing the information for decision making. Not only does this provide a more accurate overview of the hospital's state of affairs for management to use when making decisions, it also allows for clinicians to feel that management has a good understanding of their situation and considers them carefully when making decisions.

Once the relevant information and particular circumstances the information was collected in is known, then the communication of information to clinicians becomes more effective. As for the necessary simplicity of the information that allows clinicians to fully understand and

make use of the information, it is suggested that the visual representation of figures be used such as pie charts, diagrams and graphs. Clinicians do not have the time or inclination to read long lists of figures. Providing the information in a way that helps them quickly grasp essential points would be very useful to them.

Communication in a way that clinicians can understand would not be a simple thing to accomplish. Setting up such a two way communication channel would be time consuming, costly and would most likely require specialist knowledge and skill sets. However, once such a channel is established, it would take less effort and time to maintain the channel and would also serve as a means for management to provide clinicians with information about potential areas where resources could be managed more efficiently.

Something that should be considered is that the very nature of institutions means that the underlying norms and values that drive people's behaviour are often subconscious or not consciously acknowledged. Therefore misunderstandings and miscommunications may arise from a subconscious misinterpretation of the other group's actions. This misinterpretation created tension is something that can be avoided if both management and medical staff understand and acknowledge both their own and each other's institutions. The idea is not to eliminate either one of these necessary institutions, but to allow the individuals within the institutional groups to understand and respect the views, opinions and knowledge held by the individuals of each group and be able to use these to augment their own views, opinions and knowledge in order to work more efficiently. Clear communication channels will allow issues and questions relating to subconscious misunderstandings to be immediately raised and addressed, thus lessening tension.

However, whether it is communicating financial information in a simple manner or acknowledging the potential benefits of a different perspective, neither is sufficient. As discussed before, the information that needs to be communicated is still complex financial information and no matter how simplified it may be, this does not mean that clinicians can

immediately make use of it. Along with a clear communication channel there needs to be the attending education that allows the information to be used efficiently.

### **9.2.2 Education**

As can be seen from the results, the level of knowledge that a hospital employee has of the costing and funding systems creates different views and opinions of them. For example, the PBF system is controlled by the Ministry of Health. Group Management has a more pessimistic view of the system as they have enough knowledge to understand where some of its weaknesses lie. Group Hybrid have a more positive view, as they know enough to realise that it is the best system currently available, but their knowledge is not deep enough to understand many of the failings of the system so they may misplace blame attributable to the PBF formula on the management group for their dissatisfaction. Group Medical often don't know anything about the costing and funding systems at all and so dissatisfaction that arises from the weaknesses of the system are often misattributed to the failings of management.

Having so many perceptions and opinions on the same topic is one of the reasons conflict occurs. As can be seen from the results, each group is basing their actions and placing blame for their dissatisfaction according to their interpretation of the legitimacy of the PBF or IDF system. In this instance tension occurs not only when the system is perceived by a group to be less legitimate than it is but also when it is perceived to be more legitimate than it actually is. If clinician's knowledge on costing and funding systems could be increased to a level where they have a better understanding of some of the difficulties management face, then even when the issues occur, the dissatisfaction would not have such a large impact on the relationship between management and clinicians. Determining what kind of knowledge and the extent of the knowledge that would be most effective to inform the clinicians' views and opinions, as well as how best to communicate that information, are areas where more research is required.

In summary, more information needs to be made available to clinicians in a clear and simple manner and clinicians need to be able to help decide what information would be most valuable to them. They also need to be aware of (through education) the workings of the externally imposed systems such as IDF and PBF, even if it is only to the extent where they can comprehend limitations that management face and so lessen their dissatisfaction and lack of trust in management.

### **9.3 Lack of Trust in Management**

According to Spence Laschinger et al. (2007), the trust staff have in management has become increasingly important in determining the environment of the workplace, staff performance and the commitment they hold to the organisation. Trust also plays an important role in the perceived fairness of decisions. Furthermore, Whitney (1994) states that without trust people will not work together unless forced to by stringent control methods. Comstock and Fox (1995) also suggest that enhancing trust can provide a platform that makes more critical types of conversation possible. In an organization such as a small hospital where cooperation between clinicians and management is so necessary it is clear that trust in management is essential.

As can be seen, Chapter 5 discusses the issue of conflict between management and medical staff arising from the first set of interviews, where only medical personnel were consulted, clinicians have areas where they don't trust management. This lack of trust can be linked in large part to defective communication. Clinicians feel that there are many instances where they are either not asked for their opinions or, when they are asked, it appears to them that their opinions have been ignored. In some cases, their anger is valid, but in other cases there are reasons why decisions made seem to ignore their opinions. The problem is that they cannot distinguish these instances because there is not enough feedback and transparency of information to explain why certain decisions were made. All they can rely on to guide their



understanding and opinions of these decisions is their perception of the costing and funding systems and processes used to make these decisions. Even if at first their perception of the legitimacy of these systems and processes is good, if this uninformed situation persists they will start to question the legitimacy of these systems and processes. Once clinicians lose faith in the legitimacy of the costing and funding systems and processes management use to make decisions, they will develop dissatisfaction with management, and all they will see is that it is pointless to try and cooperate with management. This creates a cycle of resentment and lack of communication between management and medical personnel. From the results we can see that there are many occasions where management wishes to reach out and gain cooperation, but are frustrated at the lack of interest shown from clinicians, while at the same time many clinicians feel that it makes no difference so why waste time. In the case hospital, this situation has been exacerbated by the fact that there have been upheavals within management for some time, such upheaval contributing to clinicians' concerns and their opinions not being fully addressed. However, this is not an issue that can be fixed via meetings, no matter how well intentioned management may be. Trust needs to be re-established and the most effective way to do that is through building relationships.

If a clinician has a personal relationship with a member of management, then it is easier for trust to be formed. It is hard to have respect for and trust in someone who you never meet outside of formal meetings and who appears to show no evidence of valuing your opinion. However, if relationships can be established on a personnel level, then that respect and trust will be created and provides a basis for understanding and cooperation. There are many ways to build personal relationships between management and medical personnel. According to Holtan (1995), caring talk, personal conversation and storytelling are means of developing trust in the work place. Such interactions are more commonly found in social events that allow both parties to mingle with less formality, than in the busy and stressful workplace. Effective use of social interaction can go a long way to building trust. For example, setting up a big screen outdoors for a major sporting event, providing fires where people can cook their meals, and asking each attendee to provide a communal salad, would create very little cost to the hospital while at the same time providing a friendly environment where both

management and medical personnel could interact with people they would not normally meet socially, even bringing their families along.

Some companies have compulsory community service hours. Mixing cement together with your boss to lay a foundation for a new school is an excellent way to build relationships. Although it is not suggested that community service be made compulsory, the hospital could issue invitations to get involved with certain charity events. Such events could not only provide support for a worthy cause, but would allow for interactions in a different setting for management and medical personnel. An alternative to this is to provide a volunteer day to all staff, such as ANZ Bank does, where they allow staff to donate one work day to do volunteer work. With some organisation, staff from different areas of the hospital would be able to spend time together outside of the work place. The benefit of volunteer work on workplace relationships is supported by such groups as the United Health Group and Employee Volunteering. Both groups claim that volunteering has a positive influence on staff views of themselves, their colleagues and their employees as well as fostering a better team environment (United Health Group, 2013; Employee Volunteering, 2017).

According to Butler (1991) there are 11 conditions of trust: discreetness, availability, competence, consistency, fairness, integrity, loyalty, openness, overall trust, promise fulfilment, and receptivity. Many of these conditions are linked to open communication. According to Mishra and Morrissey (1990), open communication along with the sharing of critical information (in this case, information flow between management and clinicians), greater non-management involvement in decision making and the sharing of perceptions and feelings are integral in creating trust.

When management makes decisions that frustrate clinicians the reasons need to be explained to them clearly and in a timely manner. This will help build clinicians' trust in management that the decisions they make are fair. It will also provide information to them that will enable them to continue the discussion if management is still making what they consider to be a

harmful decision. Having the ability to pursue an argument they feel strongly about will also provide assurance. At the same time when clinicians present management with unreasonable demands that they simply cannot meet, a mutual trust will enable them to clearly explain why such demands are not possible and support their reasoning with facts and figures that clinicians will not instinctively doubt and resent.

In summary, steps should be taken to not just provide opportunities for clinicians to give their opinions, but also to build personal relationships with management staff that would create trust. Management also needs to be transparent with their decision making and clear on their reasoning to clinicians, clearly presenting facts and figures to support their assertions. Just as management must provide transparency on decision making, medical personnel need to be open to being reasonably told no and prepared to work with management to find viable alternatives. Once again, such relationships of trust and two way communication protocols take time and effort to accomplish. However, once developed they have the potential to create a great improvement on inter group trust and cooperation. Just as trust links to communication it also links to understanding each other's institutional norms and values. With basic trust, diversity of opinion and perception becomes an asset instead of a detriment.

#### **9.4 The Costing and Funding Systems**

The PBF and IDF systems are very reliant on costing information in order to function effectively. This places small hospitals at a disadvantage as they generally are not able to provide the kind of detailed costing information that larger hospitals are able to. Due to the unique circumstances that small hospitals face, it is not possible to apply large hospital's costing information to them, despite the many adjusters that attempt to rectify the situation. Consequently it is possible that small hospitals are actually receiving less funds than they would be entitled to if the costing information was more detailed, and potentially are being over charged in instances of IDFs. An accounting system is only as good as the information

that is fed into it (Hall, 2012), so without accurate costing information the PBF and IDF systems, however advanced, cannot reach their full potential. Although these systems cannot be considered to be perfect and have flaws that could be addressed, one of the biggest problems is that the costing system is skewed in favour of large hospitals that have the capacity to use a sophisticated costing system and the resources to hire people with the skills to take advantage of IDF and PBF using this sophisticated costing information. These systems operate in a manner that is favourable to large hospitals and put small hospitals at a disadvantage.

Having said that, it is not yet known how feasible or cost effective it would be to install these sophisticated systems in small hospitals. More research into this area is needed. These systems can be very costly and there will be resistance to having to run such costly systems by small hospitals (van Kesteren, 2012). One way around this issue is if these sophisticated costing systems could be used in one or two small hospitals as a sample. Even though not all small hospitals face the same issues, it would be a way to improve the costing information provided by small hospitals by using sample small hospitals as a benchmark. Additional funding provided by the state would need to be provided by the state to the hospital/s that used the system, especially in the initial experimental period.

Within the case hospital it is not possible to determine the effectiveness of the CostPro system that is being used for internal decision making, as the hospital does not yet fully utilise the system. Whether or not there would be any benefit to the hospital in using a more sophisticated ABC system such as Power Performance Manager over the cheaper CostPro, cannot be established until the hospital is able to fully utilise the costing system that they currently have. Further research is also necessary to determine exactly how much the variability in costing system sophistication over the various DHB's is actually effecting the IDF and PBF models.

As for the problems that IDF causes for small hospitals, such as large and unexpected payouts, beside more accurate costing information providing fairer IDF prices, there are other ways that small hospitals could be protected from large and unforeseeable costs. A central fund could be set up where small hospitals can apply for reimbursement of specified large IDFs. While large hospitals can absorb these large amounts, it is very difficult for small hospitals to do so and it can mean rearranging their whole budget and this creates conflict with clinicians, who were originally promised resources that can now not be provided. If at least some of this cost can be reimbursed by a central fund, it would take pressure off small hospitals and help reduce the tensions between management and medical personnel.

Another problem lies in the area of feedback to hospitals about their costing information. Although the Ministry of Health gathers all the costing information from the various DHB's, there is a lot more that they can do with that information than they currently are achieving. The costing information could be analysed and compared between the DHBs, and feedback on this could be given to the different DHBs. Hospitals would then be able to see areas where they are the most efficient or where other hospitals are more so. This would enable them to get in contact with DHBs that are performing well in areas where they are lacking and find out why and how they can improve. This could stimulate communication between the different DHBs as well as between the DHB's clinicians and management in order to use resources more efficiently. At the moment the Ministry is not providing a platform for this.

*“We get an update of national prices, but it's not benchmarked. It's more the average price of this widget has changed by x% because of x, y and z, which is helpful, but doesn't say anything about your hospitals efficiency.” (Group Management 1)*

## 9.5 Summary

Costing system sophistication and PBF and IDF engineering that is adverse to small hospitals is not easy to fix. However, there are things that can be implemented to help, like focusing on increasing the quality of the cost information that is generated by small hospitals or being more proactive in trying to combat small hospital specific problems such as IDF. Providing feedback on costing information to DHBs may be a cost effective way of pinpointing areas where DHBs excel and where they can take the example of other DHBs to improve. By doing these things there is potential for more funds to be made available and less costs to be incurred by small hospitals. The legitimacy of the costing and funding systems will be improved for small hospitals and tensions between management and clinicians will decrease.

## 9.6 Conclusion

Small DHBs face unique financial challenges that are not experienced in larger DHBs. Due to diseconomies of scale small hospitals are more difficult to operate and therefore it is important that there is a cooperative relationship between management and medical staff. Without this cooperation limited resources cannot be used to their full potential. These limited resources also include the medical staff themselves, so it key that clinicians have a positive work environment. Further, due to limited resources small hospitals often have a reliance on the goodwill of medical staff as discussed in chapter 5.3.8. A willingness to work overtime, take up extra shifts to accommodate sick or absent colleagues and put up with frustrations only faced in small hospitals are imperative to the survival of these DHBs.

Many senior clinicians also experience inconveniences that they would not face in larger hospitals, such as a senior surgeon having to see patients and complete work that in a larger hospital a registrar would be responsible for. Another side effect of not having the same hierarchical structure as larger hospitals is that a senior clinician on call would be far more likely to have to go into the hospital in the middle of the night, because there is no middle layer of seniority that would act as a screen against every small case a junior doctor has problems with. In a larger hospital, senior surgeons would only be disturbed at home for serious cases, because registrars would be able to handle most cases.

Because there is reliance on the goodwill of clinicians, it vital that management and medical personnel have a good relationship. Management are in large part responsible for creating a work environment where clinicians feel respected, supported and their opinions and concerns are heard and addressed. If there is tension between management and medical personnel created by conflicting institutions and a loss of faith in management then clinicians will begin to become dissatisfied, the workplace environment will deteriorate and goodwill will degenerate. In the worst circumstances clinicians will come to work, fulfil the very letter of their contracts and not one bit more before leaving again.

After analysis of these research results the conclusion reached is that limited resources are not the largest danger to the continuity of small hospitals. Excellent health care can still be provided, even in less than ideal circumstances, when there is a strong collegial and cooperative environment that connects all levels of the hospital.

This research determined that both the institution of management that focuses on costs and economic use of resources and the institution of medical personnel which is patient focused, are necessary to the operation of a hospital. Unlike in the for profit sector, where conflicting institutions are detrimental, in a breakeven, service-focused organisation, such as a public hospital, both institutions need to be present. Though it can be a difficult to balance, the ideal situation would be for these institutions to work in harmony and perhaps eventually merge.

There is no doubt that there are flaws in the PBF and IDF systems that have serious impacts on small hospitals, and that tensions arise from this. It is possible that increasing the costing system sophistication and improving the quality of costing information that is used as a foundation of these systems is a viable option, but far more research needs to be undertaken before this could become a reality, as solutions to various problems must be found.

More immediately, much of the tension between the management and medical groups is because of misconceptions, limited knowledge and poor communication leading medical personnel to feel that management does not respect their opinions and management to believe that medical personnel are unwilling to cooperate with them. Of the three main reasons this research discovered for the existence of tension in the DHB, (ineffective communication, lack of trust in management and the costing and funding systems themselves) only the last has to do directly with accounting. If relationships of trust between management and medical staff can be built up, and good communication channels can bring transparency and easy access to needed information, then the members of these competing groups (or institutions) can better understand each the other's perspectives, and their underlying norms and values and supports each other through cooperation.



Naturally, this is a rather idealistic view and to achieve such an effect would take considerable time and hence effort. However, there is no doubt that even if no perfect balance can be achieved, there is still room and potential for improvement and further research into these areas have great value for improving the efficiency of the limited resources available to the New Zealand Public Health Care System.



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