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In addition to the above conditions, authors give their consent for the digital copy of their work to be used subject to the conditions specified on the Library Thesis Consent Form and Deposit Licence.
A Multi-Stakeholder Framework for Performance Management of Community Health Services Contractors

Omid Sherkat
Abstract

Aim – The aim of this thesis was to develop a performance management framework for public health purchasers working with community health services contractors. The research began by examining the appropriateness of the Deming cycle (known as Plan-Do-Check-Act or PDCA) as a platform for building the performance management framework. It subsequently found that the original structure of the PDCA mismatches the ongoing nature of the community health services purchasing process leading to a modified version called the Planning-Delivery-Improvement (PDI) cycle.

Methods – As a qualitative enquiry, an action research was designed to find the elements required in the performance management framework. This action research comprised three cycles, each of which consisted of a series of steps. The data collection and analysis, which employed various tools and techniques, continued concurrently along the three cycles. The validity of the findings was secured through constantly returning to participants who would then verify the interpretations and interim results. At the end of the research, a group of experts who had not participated in any of the earlier steps validated the performance management framework.

Findings – The major output of this study is the creation of a multi-stakeholder performance management framework for the community health services purchasing process. The PDCA cycle was adjusted to the characteristics of the community health services contracting process culminating in the Planning-Delivery-Improvement (PDI) cycle. Other findings included the revelation of the continuity of the CHS performance management process beyond the scope of annual purchasing, dynamic rankings of stakeholders based on the stage of the community health services purchasing process, and integrating service improvement as a stage into the community health services performance management.

Contributions – The study first provides a multi-stakeholder framework for performance management of community health services contractors. Second, it extends the application of the PDCA cycle into an Inter-organisation Relationships level and adjusts the PDCA to the ongoing nature of the community health services purchasing process using a modified framework to integrate service improvement
into the community health services performance management (PDI cycle). Third, it shows how process maps can be used to identify stakeholders and the dynamic nature of stakeholder rankings. The conclusion sets out a number of directions for future research and outlines how the findings reported in this thesis can be further developed.
Acknowledgements

First and foremost my special thanks go to my supervisors, Professor Paul Rouse and Dr. Winnie O’Grady, whose guidance and inspiration in the preparation and completion of this thesis have been extremely valuable. I owe a debt of gratitude to Professor Paul Rouse for encouraging me to pursue this degree.

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The name of individuals in District Health Boards and Community-based service providers who participated in this project must stay confidential, and I express my gratitude for the contribution they had made. I would also like to thank Russell Greenwood for editing this manuscript.

I may never have had the fortune to pursue my journey of life-long learning without the emotional and financial support of my parents, Maryam and Morteza, and my brother, Navid. To these wonderful people, I give special thanks. Words can never express how truly grateful I am to my mother for all of the sacrifices that she has made to support me. Last but not least, I extend my sincere thanks to my girlfriend, Wei, who never dismissed to offer support and encouragement generously. So to Wei, a million thanks for listening, offering me advice, and cheering me up through this entire journey.
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<th>Description</th>
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<tbody>
<tr>
<td><strong>3Es</strong></td>
<td>Economy, Efficiency, and Effectiveness</td>
</tr>
<tr>
<td><strong>ACC</strong></td>
<td>Accident Compensation Corporation</td>
</tr>
<tr>
<td><strong>ALTC</strong></td>
<td>Australasian Long-term Conditions</td>
</tr>
<tr>
<td><strong>ARHOP</strong></td>
<td>Adult Rehabilitation and Health of Older People</td>
</tr>
<tr>
<td><strong>ARRC</strong></td>
<td>Age-related Residential Care</td>
</tr>
<tr>
<td><strong>Appx</strong></td>
<td>Appendix</td>
</tr>
<tr>
<td><strong>CHS</strong></td>
<td>Community Health Services</td>
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<tr>
<td><strong>CPS</strong></td>
<td>Community Pharmacy Services</td>
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<tr>
<td><strong>CPSA</strong></td>
<td>Community Pharmacy Service Agreement</td>
</tr>
<tr>
<td><strong>CQI</strong></td>
<td>Continuous Quality Improvement</td>
</tr>
<tr>
<td><strong>CRC</strong></td>
<td>Community Residential Care</td>
</tr>
<tr>
<td><strong>CSF</strong></td>
<td>Critical Success Factor</td>
</tr>
<tr>
<td><strong>DHB</strong></td>
<td>District Health Board</td>
</tr>
<tr>
<td><strong>DHBSS</strong></td>
<td>District Health Board Shared Services</td>
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<tr>
<td><strong>Fig</strong></td>
<td>Figure</td>
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<tr>
<td><strong>FP</strong></td>
<td>For-profit</td>
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<tr>
<td><strong>GD</strong></td>
<td>Group Discussion</td>
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<tr>
<td><strong>GP</strong></td>
<td>General Practitioner</td>
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<tr>
<td><strong>GTO</strong></td>
<td>Getting to Outcomes</td>
</tr>
<tr>
<td><strong>HCO</strong></td>
<td>Health Care Organisation</td>
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<tr>
<td><strong>HCSS</strong></td>
<td>Home and Community Support Services</td>
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<tr>
<td><strong>HDC</strong></td>
<td>Health and Disability Commissioner</td>
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<tr>
<td><strong>HOP</strong></td>
<td>Health of Older People</td>
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<tr>
<td><strong>HRQoL</strong></td>
<td>Health-related Quality of Life</td>
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<tr>
<td><strong>HSQC</strong></td>
<td>Health Quality &amp; Safety Commission</td>
</tr>
<tr>
<td><strong>IOM</strong></td>
<td>Institute of Medicine</td>
</tr>
<tr>
<td><strong>IORs</strong></td>
<td>Inter-organisational Relationships</td>
</tr>
<tr>
<td><strong>Lit</strong></td>
<td>Literature</td>
</tr>
<tr>
<td><strong>LTC</strong></td>
<td>Long-term Condition</td>
</tr>
<tr>
<td><strong>MDT</strong></td>
<td>Multidisciplinary Team</td>
</tr>
<tr>
<td><strong>MOH</strong></td>
<td>Ministry of Health</td>
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<tr>
<td><strong>NASC</strong></td>
<td>Needs Assessment &amp; Service Coordination</td>
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<tr>
<td><strong>NDSA</strong></td>
<td>Northern DHB Support Agency</td>
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<tr>
<td>Abbreviation</td>
<td>Full Form</td>
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<tr>
<td>NP</td>
<td>Non-profit</td>
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<tr>
<td>NGO</td>
<td>Non-governmental Organisational</td>
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<tr>
<td>NPM</td>
<td>New Public Management</td>
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<td>NZ</td>
<td>New Zealand</td>
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<tr>
<td>NZHDS</td>
<td>New Zealand Health and Disability Strategy</td>
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<tr>
<td>NZS</td>
<td>New Zealand Standard</td>
</tr>
<tr>
<td>OAG</td>
<td>Office of the Auditor-General</td>
</tr>
<tr>
<td>PBC</td>
<td>Performance-based Contracting</td>
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<tr>
<td>PDCA</td>
<td>Plan-Do-Check-Act</td>
</tr>
<tr>
<td>PDI</td>
<td>Planning-Delivery-Improvement</td>
</tr>
<tr>
<td>PHARMAC</td>
<td>Pharmaceutical Management Agency</td>
</tr>
<tr>
<td>PHO</td>
<td>Primary Health Organisation</td>
</tr>
<tr>
<td>PI</td>
<td>Performance Indicator</td>
</tr>
<tr>
<td>PMF</td>
<td>Performance Management Framework</td>
</tr>
<tr>
<td>PMM</td>
<td>Performance Measurement and Management</td>
</tr>
<tr>
<td>QoL</td>
<td>Quality of Life</td>
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<tr>
<td>RBA</td>
<td>Results-based Accountability</td>
</tr>
<tr>
<td>RQ</td>
<td>Research Questions</td>
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<tr>
<td>VfM</td>
<td>Value for Money</td>
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1 Introduction

1.1 An Introduction to the Thesis

This thesis provides a performance management framework (PMF) for public health purchasers who are involved with community health services (CHS) contracting. The study adopts the Plan-Do-Check-Adjust (PDCA cycle) developed by Deming (1986) that has become popular as a Continuous Quality Improvement (CQI) approach in quality management. The separation of funding from service provision necessitates both formal contracting and monitoring systems to align funder needs, objectives, and expectations with providers’ understanding and commitment. Thus, the PMF is designed to consider stakeholders’ perceptions of key areas of performance as well as the needs of the dominant stakeholder which in this study is the District Health Board.

This first chapter provides a background to the thesis and presents the research problem that steered the investigation. It also describes the searching and selection of the relevant literature, motivations for studying community health services, and contributions. Then, it briefly introduces the New Zealand health and disability sector. This chapter ends with the research boundaries and a roadmap to the thesis.

1.2 A Background to Public Service Contracting

In the 1980s, New Public Management (NPM) became synonymous with the quest for smarter as well as smaller government, leading many countries to implement public sector reforms to improve the effectiveness and efficiency of governments (Rhodes, 1996; Boston et al., 1996; Hood, 1995; Osborne and Gaebler, 1992). The NPM is a concept articulated by Osborne and Gaebler (1992) that applies a business customer service model to manage public services. From 1990 onward, the NPM doctrine spread and intensified across countries often using a purchaser-provider split within public services and formal contracting to regulate the transactional relationships between purchaser and provider.

Hood (1995) describes how public sector agencies pursued the adoption of private sector management techniques to reduce the cost of public services as well as increasing service quality. Consequently, great emphasis was placed on measuring the performance of the public sector and utilisation of public resources using measurement concepts such as Value for Money (Rhodes, 1996).
On the other hand, while NPM originally stressed the use of contracting and measuring the efficiency of contractors, some researchers criticised NPM for its conflicting tensions between human actions and organisational performance as well as decreased accountability for public resources due to privatisation (Sharma and Lawrence, 2015; Lapsley, 2008; Cole and Cooper, 2006). Following this debate, Denhardt and Denhardt (2000) argue for a ‘New Public Services’ approach emphasising that both collaborative management styles together with population needs and wants determine the accountability requirements for public servants. Similarly, Osborne (2006) contends that ‘New Public Governance’ is another alternative that asserts relational approaches to service contracting when managing networks of stakeholders and that outcomes should transcend efficiency measurement. Despite acknowledging the differences between these approaches, it is not the intention of the thesis to delve into the details of various alternatives to NPM, considering instead the importance of relationship management styles, stakeholder engagement, and quality of services as contemporary elements of providers’ performance management.

Contracting with service providers establishes inter-organisational relationships (IOR) which need comprehensive performance management of providers. Dekker (2004) argues that controlling IORs needs a measurement system to ensure the achievement of desirable and anticipated outcomes. Controlling IORs is complicated as it requires stakeholders’ collaboration and exchange of information among them (Provan and Milward, 2001). Meanwhile, identifying and unravelling their perspectives makes control even more complicated, to the extent that Pouloudi and Whitley (1997) point out the difficulty of identifying stakeholders for designing Inter-organisational Systems.

The health sector, in particular, embraced the dichotomy between purchaser and provider of services with efforts to increase efficiency in service production. A major plank in this platform of reform was the creation of a purchaser-provider split to address efficiency problems (Siverbo, 2004). Hence, contracts are the pivotal tool in the purchaser-provider model that mediates the provision of health services between the public purchaser and provider (Saario and Raitakari, 2010). In the health sector, diverse perspectives oblige authorities to design various measures for assessing financial and non-financial dimensions of performance. Nevertheless,
stakeholders may still look for different performance information in each dimension, depending on their role in health system performance. As an example, Blumenthal (1996) explains that quality of health care is perceived differently by various stakeholders, namely clients\(^1\), purchasers, providers, and physicians.

The next section introduces the research problem and questions formulated in this study.

### 1.3 Research Problem

Among a variety of health care services, community health services (CHS), cover a range of diagnostic, preventive, and therapeutic\(^2\) health services for individuals in the community and outside a hospital. CHS can be provided by public sector agencies as well as non-governmental organisations (NGOs) which can be either for-profit or non-profit. However, Anthony (1988) contends that there is no meaningful difference between performance management in either type, because in his opinion, managers are responsible for the wise use of resources regardless of whether or not an organisation aims to make profit. For NGOs, these services are typically purchased by a public health funding organisation through contracts to deliver to the population (e.g. Jacobs, 2007; Fennell, 2001).

Given that the necessity of managing providers’ performance lies in health services contracting, academics and practitioners have developed various frameworks with the aim of enabling public managers to increase VfM and improve quality (e.g. U.S. Centers for Disease Control and Prevention, 2013; Raleigh and Foot, 2010; National Audit Office, 2008; Kamis-Gould, 1987). Despite the advancements in managing health services, recent studies provide compelling evidence on the need for further research into developing and improving these frameworks. These frameworks are required to cover multiple dimensions of performance and stakeholders, and encapsulate these into a dynamic format to adjust the performance responses to new conditions (e.g. Beitsch et al., 2015; Blumenthal, 1996; Anthony, 1988; Jacobs, 2007; Fennell, 2001).

---

1. When referring to the consumers of CHS, this study uses ‘client’ or ‘patient’ interchangeably depending on whether the service is rehabilitative (home care for older people) or curative (chronic illnesses such as asthma).

2. Diagnostic services, such as screening for cancer; preventive services, such as health education and counselling; and therapeutic services, such as radiotherapy in clinically localised cancer (Sox, H. J. J. 1994. Preventive Health Services in Adults. *New England Journal of Medicine*, 330, 1589-1595.)
Respecting the need for comprehensive approaches to managing the providers’ performance, the overarching research problem addressed in this thesis is:

_What components are required to be in a framework for managing the performance of service contractors?_

The study thus aims to identify the required components of a PMF for public purchasers to manage the performance of CHS contractors while taking stakeholders into account.

From the above discussion, it is envisaged that such a PMF must contain at least four features: (1) stakeholders who have various degrees of influence and interest over the providers’ performance; (2) critical success factors (CSFs) that Rockart (1979) suggests for managing business performance while Eni (1989) advocates using them as useful tools for health care planning; (3) performance indicators (PIs) that assess performance regarding the CSFs, and (4) dynamic features to adjust to changes inherent in the health sector. Consequently, the following research questions are tailored to address the research problem and achieve the aim.

1. Who are the relevant stakeholders in contracted Community Health Services (CHS) and is there a ranking in terms of interest and influence?
2. What elements or components of performance need to be included in a framework to manage the provision of CHS?
3. What are the required performance indicators for assessing the performance of CHS providers and their service quality?

The second and third research questions explicitly address two fundamental concerns posed by Neely (1999, p.221) who suggests specifying ‘what are the determinants of business performance?’ and ‘how can business performance be measured?’

The PMF does not intend to change the contract currently used, rather acting as a tool for purchasers to manage their relationship with providers which is already formalised by the contract. The research begins by conceptualising performance...
elements and the structure of the PMF as a Plan-Do-Check-Adjust (PDCA\textsuperscript{3} cycle) framework developed by Deming (1986). In health services, the PDCA has become popular as a Continuous Quality Improvement (CQI) approach in quality management and is a process to ensure plans and programmes are systematically and purposefully improving services and increasing desired outcomes (e.g. Shortell et al., 1998). However, usage of the PDCA has been limited to defining quality improvement projects (Beitsch et al., 2015). Accordingly, the study identifies the CHS stakeholders who can affect or be affected by the quality of provided services and incorporates them into the PMF. The identified stakeholders will then be ranked in each stage of the performance management process that is organised around the four stages of the PDCA.

The literature informing elements required to build the PMF is introduced next.

1.4 Literature Search and Selection

There is an extensive literature on public service contracting and public health systems, covering a variety of subjects from different perspectives. In this study, identifying the relevant literature followed a structured exercise that initially searched widely for subjects related to the thesis with even the slightest bearing on public health service contracting.

A search of the literature using databases including Emerald Insight, EBSCOhost, Scopus MEDLINE, and PubMed was performed to gather relevant publications such as journal articles, reports, e-books, online resources, and relevant documents where available. To complement this search, the Google and Google Scholar websites were also used to find resources addressing the topic of this thesis. To guide this process, various combinations of keywords relating to the research questions were searched.

The first round of searching was conducted without specifying the publication date. In the second round, searching was limited to studies published from 2011 onward. Relevant articles were reviewed in full, where key information was extracted and documented considering the research’s aim. As a result, different

\textsuperscript{3} Also known as PDSA (with ‘Study’ instead of ‘Check’) or Shewhart, or Deming cycle. The PDCA was developed by Deming (1986), being an iterative four-stage management method used in continuous improvement of processes and products.
strands of the literature were categorised into two groups: the fundamentals of IORs and literature pertaining directly to the research problem.

The fundamentals of IORs when service is the subject of transactions\(^4\) consist of system (e.g. Von Bertalanffy, 1956), contingency (e.g. Woodward, 1958), contract (e.g. Williamson, 1979; Coase, 1937), principal-agent problem (e.g. Eisenhardt, 1989; Jensen and Meckling, 1976), management (e.g. Koontz, 1961; March and Simon, 1958; Fayol, 1949), management control (e.g. Simons, 1995; Anthony, 1988; Covaleski and Aiken, 1986), and quality of service (e.g. Lusch and Vargo, 2006; Parasuraman et al., 1988; Deming, 1986; Garvin, 1984; Grönroos, 1984; Crosby, 1979).

As the research progressed, the literature selection and review focused primarily on subjects related to the research problem. Therefore, the research problem literature includes four strands informing the research questions and development of the intended PMF.

First, the *NPM’s implications for managing contractors’ performance* in the public health sector provides the context within which the PMF will be constructed. Second, the literature on *performance measurement and management (PMM)* sheds light on what constitutes a PMF in respect of the selected context. Third, the literature on *stakeholder analysis* includes theories and techniques for identifying and ranking stakeholders. Fourth, the literature covering *quality of health care services* was considered to identify the key concerns about performance in health care and, specifically, CHS.

The next section presents the justification for studying the CHS performance management.

### 1.5 Justification for the Study

The initial motivation for this study arose from a conversation with a senior manager in a District Health Board who was concerned about the lack of adequate performance management frameworks in the sector, especially for managing non-governmental service providers. Subsequent research into the sector and literature found that concerns had also been raised in the following four areas.

---

\(^4\) Transactions are the interaction between social entities for exchanging resources (e.g. commodities, services, and funds) necessitating the employment of control mechanisms to prevent biased results (Coase, 1937).
1. **Growing Demand for Performance Management rather than Performance Measurement**

Although controlling performance is often set out in the contract, Smith (2002) refers to a report that the OECD\(^5\) published on 1996, which highlighted micromanagement of clinical behaviour or authorities’ reliance on more passive approaches for securing performance improvement instead of employing comprehensive management methods.

This problem remains unsolved as Halachmi (2011) attests, commenting that active performance management of public organisations is largely overlooked due to an excessive reliance on measurement. Likewise, Gerrish (2016) points to the primacy of performance management for improving public services and suggests further research is required to develop performance management mechanisms embodying multiple dimensions.

2. **Quality of Health Care Services**

As Chalkley and Malcomson (2000) point out, a government agency that purchases health services is concerned with the appropriateness of services for the clients’ needs and wants. Appropriateness refers to service quality, which is a multifaceted concept without a universally accepted definition (Campbell et al., 2000). As a general definition, the service marketing scholars (e.g. Parasuraman et al., 1988; Grönroos, 1984) postulate that the quality of service is the gap between experienced and anticipated quality perceived by consumers. In the area of health services, patient satisfaction is a quality indicator of health care services that determines how the clients have experienced the service and whether the service was able to meet their expectations (e.g. Mpinga and Chastonay, 2011; Gill and White, 2009; Sitzia and Wood, 1997).

However, it is difficult for the purchaser to monitor the quality of CHS in real-time. As Kamis-Gould (1987) points out, quality is the consequence of providers’ performance as perceived by patients and the purchaser usually does not observe their interactions directly. Service marketing scholars, namely Lusch and Vargo (2006), explain this phenomenon as the co-creation of value where production and consumption of service are inseparable and, hence, that only the client can judge the

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quality of service. A PMF needs to bridge this gap for purchasers to manage service quality better via continuous monitoring of providers’ performance.

Most advances in quality of care are in hospital services, to the extent that Wilf-Miron and Shemer (2004) and Wilf-Miron et al. (2008) highlight the paucity of attention to managing the quality of CHS. However, as Donabedian (1988) contends, quality of care is an abstruse area since there is more than one legitimate formulation of quality depending on the system of care and the nature and extent of responsibilities.

CHS scholars (Lee and Nowell, 2014; Liket et al., 2014; Carman, 2007) also provide convincing evidence that every attempt to provide quality health care services must centre on the clients or patients and their needs. This emphasis on the patient is consistent with increasing attention to patient-centred care which according to Richards et al. (2015) is the mission of health care managers.

3. The Growing Focus on Patient-Centred Care

The U.S. Institute of Medicine (2001), known as IOM, defines patient-centred care as a health care system that establishes a partnership among practitioners, patients, and their families (when appropriate). The purpose of this partnership is to ensure that decisions respect patients’ wants, needs, and preferences and that patients have the education and support they need to make decisions and participate in their care. From his experience with IOM, Berwick (2009, p.559) asserts that ‘patient-centeredness ought to have stature as a dimension of quality in its own right, it is also true that most researchers who have studied it systematically have found that it does often have a positive relationship to classical health status outcomes’. The value of patient-centredness rests in the practical knowledge which can be provided by patients and families to care provision, as long as they are properly engaged in decision-making about their treatments.

Patient and Family Centred Care, as Boon (2012) describes, is an on-going process, not a one-time event, that inspires care as ‘a journey’. Therefore, there is no end-point for care, but rather a continual evolution towards the goal of creating partnerships among health care practitioners, patients, and families that will lead to achieving the best outcomes and enhance the quality and safety of health care. Provan and Kenis (2008) also stress that engaging key stakeholders of CHS and
evaluating their cooperation level is imperative to managing the performance of a service delivery network since a coordinated network is a prerequisite of health service effectiveness.

The New Zealand MOH also pays attention to Patient and Family Centred Care (Boyd et al., 2010), the ‘new approach’ to health care which is concentrating on the needs of patients and families, as well as engaging them in decision-making.

Thus, a PMF needs to be structured around patient needs and values which signal to public purchasers to engage or at least assign these needs a high priority in every single action associated with CHS planning, delivery, and improvement.

4. The Quest for Quality Improvement in New Zealand’s Health System

Countries follow specific health priorities, targeting certain outcomes that originate from the population needs and values, requiring frameworks exclusively designed to secure optimal performance (Murray and Frenk, 2000).

The New Zealand Health and Disability Strategy (NZHS/NZDS) outlines health priorities and objectives. To implement the strategy, the New Zealand Ministry of Health (MOH) has emphasised performance management as a priority for driving performance improvement across the entire health system (Ministry of Health, 2012b). The MOH aims to improve the efficiency of service providers in the health sector, where efficiency means increasing VfM and reducing duplication and administrative costs along with controlling overall cost growth (Health Benefits Limited, 2012).

Regarding performance management frameworks, the Balanced Scorecard, promulgated by Kaplan and Norton (1992), has been considered in New Zealand public health as a means to manage the performance of service providers (Ministry of Health, 2003a). However, referring to Northcott and France (2005), the application of the balanced scorecard has been focused mainly on hospitals while, according to Gauld et al. (2011), a majority of health services contributing to the health of New Zealanders are provided within the community. On the other hand, Gauld (2012) reflects that although the post-2008 reforms in the NZ health system aimed to improve performance, the establishment of several organisations at national and regional level increased the complexity of coordination between these entities.
These concerns provide the motivation to create a framework suitable for managing multiple dimensions of CHS in which stakeholders of the service process are taken into consideration. Chapter 2 will describe issues with the existing performance management frameworks designed for contracted CHS.

The following section provides an overview of the research method used to build a PMF for managing CHS contractors.

1.6 Research Method

As a qualitative inquiry, action research was used to investigate the phenomenon and identify the elements and components of performance management. Kaplan (1998) suggests considering action research for the development of new solutions to improve existing practices. Likewise, action research seemed an appropriate method because the PMF is intended to mitigate the problems of the CHS performance management. Action research facilitated identifying the components of the PMF through collaboration with practitioners in the field.

This action research comprises three cycles, each of which consists of a set of steps. The required data was continuously gathered using observation, group discussion, semi-structured interview, and archival documents (Miles and Huberman, 1994). Multiple sources of data enabled the investigation to triangulate the data and compare findings from different sources to increase the validity of final results. Data analysis comprised reflection and coding by NVivo. Coding was implemented following an abductive logic, as Dubois and Gadde (2002) explain, where practical concerns informed the study of relevant literature and, reciprocally, the literature helped to modify themes which were later used to construct the PMF.

The contributions of this action research are outlined in the following section.

1.7 Contributions

The thesis contributes to performance measurement and management, specifically to the field of performance management of CHS contractors. The contribution is made by constructing a multi-stakeholder PMF that addresses topical issues of health services management including CQI approaches to managing providers’ performance, stakeholder engagement, and patient-centred care.

The initial assumption about the PMF’s structure was conceptualised as four stages of the PDCA. Thus, the research extends the application of the PDCA to an
IORs level. The fact that the original PDCA cycle was modified through the research process to reflect the ongoing nature of the CHS purchasing process will be discussed later.

For identifying stakeholders, this research employed process mapping (e.g., Shostack, 1984) which, unlike conventional stakeholder mapping, visualises entities based on their connections to the service process. The study explains that when the process has multiple stages, stakeholders’ ranking varied in each stage, implying that stakeholder ranking can be process-based instead of resource-based.

Given the core sentiment of CQI, the research integrates service improvement into a CHS performance management process that elevates quality improvement to an independent stage.

The findings of this study also have some practical implications for public purchasers managing CHS contractors. These implications will be delivered by introducing a PMF that embraces the notion of patient-centred care. This PMF enables purchasers to view performance management across a wider scope, thereby guiding better decisions on service improvement. In addition, the insights generated from the study should contribute to better engagement of stakeholders based on their interest and influence in each stage of the PMF.

The next section presents a background to the New Zealand health and disability sector.

1.8 New Zealand Health and Disability Sector

This section briefly introduces three aspects of the NZ health and disability sector in respect to the aim of this research.

1.8.1 The NZ Health and Disability Structure

Figure 1.1 illustrates a simplified model of the NZ health and disability structure in which the focus of the study is also indicated.

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Services are provided via cooperation between government agencies and private and non-governmental organisations (NGOs) providing services. Accountability arrangements are in place to ensure performance and service delivery across the health and disability system. District Health Boards (DHBs) administer most of the day-to-day business of the system and are organisations responsible for ensuring the provision of health and disability services to populations within a defined geographical area (Ministry of Health, 2012a). The New Zealand Public Health and Disability Act 2000 sets out the objectives for DHBs, of which those relevant to this research include:

- improving, promoting and protecting the health of people and communities
- seeking the optimum arrangement for the most effective and efficient delivery of health services to meet local, regional, and national needs
- promoting effective care or support of those in need of personal health services or disability support
- reducing health disparities by improving health outcomes for Māori and other population groups (Ministry of Health, 2012a)

DHBs deliver health and disability services through both DHB provider arms, such as public hospitals, and private and NGOs as shown in Figure 1.1. To
exemplify how DHBs define performance, Auckland DHB \(^7\) sets its vision for 2016 as ‘Healthy communities, world-class healthcare, achieved together’. Auckland DHB has set its direction towards ‘patient-centredness, extensive collaboration of stakeholders, and improved quality and experience of care’ (Auckland DHB, 2015). Correspondingly, key result areas target (1) improved health status; (2) economic sustainability; (3) patient safety; (4) healthy and engaged workforce; (5) better quality and experience of care (ibid, p.15).

NGOs (also known as the Third Sector Organisations in the UK and Australia) have a significant role in New Zealand’s social and economic well-being at the community level that according to Harrison (2010) accounts for some 4.9% of GDP. NGOs receive annually two billion dollars from the MOH and four billion dollars from the DHBs (Ministry of Health, 2011). NGOs offer diverse services in primary care, mental health, personal health, and disability support services, and include kaupapa services (specific health and disability services for Māori and Pacific clients to reduce inequities) in the case of Māori and Pacific providers. In some DHBs, these services may contribute up to 40% of the total funded value of services (Ministry of Health, 2011; Harrison, 2010). Harrison (2010) also argues that the role of NGOs becomes more important with the challenges in health and disability care, particularly with some severe illnesses and chronic conditions.

1.8.2 The NZ Health and Disability Strategy

In 2000, the NZ Health Strategy set the platform for the Government’s action on health. The strategy outlines fundamental principles, goals, and objectives of health and indicates the priorities for the health system. It also set out the criteria and tools for ensuring quality services and emphasised ‘sector-wide continuous quality improvement mechanisms and initiatives’ (Ministry of Health, 2000, p. viii).

‘Two key strategies set the overarching guide for the development of health and disability services in New Zealand. These two are the New Zealand Health Strategy (NZHS), covering health-related issues, and the New Zealand Disability Strategy (NZDS), which covers disability issues. These will guide the way other health

issues or population group specific strategies and action plans are developed and carried out’ (Ministry of Health, 2000, p.35).

Planned Strategies have been developed with the NZHS to complete and facilitate its implementation. These sub-strategies focus particularly on health deliverables to specific groups or healthcare services in the community, some of which are in place until full achievement, while others are time-limited and subject to revision. In addition to the Planned Strategies, there is a list of ‘Existing Strategies’ that were devised earlier than the NZHS in 2000.

Figure 1.2 portrays the relationship between the various areas and DHB activities in association with the NZHS/NZDS and quality initiatives in the public health sector. Figure 1.2 depicts a circular format starting with NZHS/NZDS through needs assessment, funding agreement, performance, and service outcomes conveying that public health purchasers need to follow a continuous approach to improving the health of the population. Figure 1.2 also endorses the adoption of continuous improvement in designing a PMF.

![Figure 1.2 Relationship of DHB Activities to the New Zealand Health Strategy](image)

However, Figure 1.2 does not specify when outcomes inform necessary changes to the NZHS/NZDS nor where service improvements should take place. Setting service improvement apart from the performance management process may undermine the significance of continuous service improvement. As Chapter 2 explains (section 2.6), it is important that service improvement is formally
acknowledged as a stage in the CHS performance management to reinforce improvements in the NZHS/NZDS.

There is also an emphasis by MOH on rewarding high-quality providers across the entire health system and assessing where further support and development are needed to achieve a higher quality of health services. Key improvements sought include:

- clarifying roles and accountabilities through DHBs’ accountability agreements, which have explicit performance targets based on the NZHS’s goals and objectives
- monitoring the performance of actors in comparison to quality expectations
- the use of comparative information by health providers and others for quality improvement and learning purposes

As shown in Figure 1.1, the MOH uses accountability mechanisms and monitoring tools to measure the performance of DHBs against quality expectations. It also exhibits the DHBs’ monitoring of the performance of service providers who have service level agreements with DHBs (Ministry of Health, 2000). Despite seeking these improvements, the DHB senior manager was emphatic that these improvements were not happening and there was a strong need for a comprehensive performance management framework.

1.8.3 Funding and Performance Control at DHB Level

The New Zealand health system is predominantly tax-funded. The MOH allocates more than 76% of approximately the $13.983 billion (over $10,819 million) of public funds it manages through government health funding (called Vote Health) to DHBs (Auckland DHB, 2013; The Treasury, 2012).

Vote Health provides only part of the total money spent on health services in New Zealand. Other significant sources of funding are government agencies such as the Accident Compensation Corporation (ACC), local government and private medical cover (Auckland DHB, 2013). ACC provides a wide range of services from paying for treatment and medical costs to help around the home while an injured person recovers, as well as providing assistance income if the person is unable to work because of injury (New Zealand Government, 2011). The Government has set
out three major roles for ACC: (1) prevent injury; (2) make sure people can get treatment for an injury; (3) help people get back to everyday life as soon as possible.

ACC is funded by levies on employee earnings and employer payrolls, petrol taxes, fees from vehicle licencing, and Government funding (New Zealand Government, 2011).

DHBs are funded using a Population-Based Funding Formula\(^8\) which is an aggregate formula that determines each DHB’s percentage share of available funding, based on the population living in each district. Each DHB’s share of health and disability funding is determined by:

1. its share of the projected New Zealand population weighted according to the national average cost of the health and disability support services used by different demographic groups

2. an additional policy-based weighting for any unmet need that recognises the different challenges DHBs face in reducing disparities between population groups

3. a rural adjustment and an adjustment for overseas visitors, each of which redistributes a set amount of funding between DHBs to recognise unavoidable differences in the cost of providing certain health and disability support services

The major tool of controlling performance is reporting against six national health targets. (1) Shorter stays in emergency departments. (2) Improved access to elective surgery. (3) Shorter waits for cancer treatment. (4) Increased immunisation. (5) Better help for smokers to quit. (6) More heart and diabetes checks (Minister of Health, 2013). For assessing performance, measures are defined based on these targets. DHBs are responsible for periodically reporting their performance, including outcomes, in serving the population on the measures, to the MOH, which is part of the wider accountability arrangements\(^9\). One of the frameworks that DHBs

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use to report their performance to the MOH is ‘DHB non-financial monitoring framework and performance measures’\textsuperscript{10}, which is updated every year and requires DHBs to include the measures in their annual plans.

On the service delivery end, DHBs monitor performance of NGOs against criteria set in the contract on which providers report to DHBs. Furthermore, auditing and accreditation are principal tools for monitoring performance (Ministry of Health, 2003a). In sum, reporting and auditing are principal vehicles for managing the performance of NGOs that rely on periodic monitoring.

1.9 Research Boundaries

The research was conducted in the New Zealand (NZ) public health system. Notwithstanding, New Zealand’s health system is based on the New Public Management (NPM) model, and thus shares a similar structure to other countries who have also adopted the NPM model. Therefore, the results of this research should be applicable to other similar health systems.

Three boundaries were set out to limit the scope of the research within the larger area of health service contracting.

First, as indicated in Figure 1.1, the focus of the study is on the contractual relationship between DHBs and NGO providers to identify the required elements of a PMF to assist public purchasers in DHBs to continuously improve the performance of providers and quality of their services. Therefore, the contractual relationship between purchaser and provider is the \textit{unit of analysis} while the annual plan which is the timeframe for the performance of providers serves as the \textit{level of analysis}. Concentrating on the relationship between DHBs and NGOs means that other sources of Government Funding, such as ACC, were excluded but in part of stakeholder analysis, the role of other entities on the relationship between DHB and NGO is deemed to be important. Focusing on the annual plan means that other health care plans and programmes are excluded from the investigation. The reason for concentrating on DHBs was that they receive the largest amount of public health funding and play a prominent role in population health, whereas ACC provides funding to compensate costs of injuries and acute care.

Second, among a variety of CHS that DHBs purchase, this research chose to focus on Home and Community Support Services (HCSS) and Community Pharmacy Services (CPS). This selection was made due to obtaining easier access to participants in these two areas. Nonetheless, the two services are high-cost areas in the New Zealand health system (Ministry of Health, 2003b).

Third, within the boundaries of both services, the research narrowed its attention to specific service segments. In HCSS, the study selected the health of older people (HOP), aged 65 and older, that aims to keep older people well and support them to continue to live safely in the community (Ministry of Health, 2002). Therefore, other home care services which are provided to younger patients with various forms of disabilities were excluded. In CPS, the study examined the Long-term Condition (LTC) services which community pharmacies provide to patients suffering from chronic illnesses. In brief, LTCs are any ongoing, long-term or recurring conditions such as cardiovascular disease, diabetes, or asthma that have a significant impact on people’s lives (Carryer et al., 2014). The reason for a further limitation of scope was a call for enhancing performance management of LTCs in New Zealand (Carryer et al., 2014) concerning a need for a patient-centeredness approach. Moreover, the quality of both services relies on continuity of care, which demands that they employ continuous approaches to their management.

1.10 Roadmap to the Thesis

The thesis is structured in six chapters.

Chapter 1 presents the subject and context of enquiry that rests in the NPM and its implications for provider performance management when services are purchased from NGOs. The chapter introduces the main aspects of research addressing the problem under investigation, choice of methodology, and contributions made by the research. The New Zealand health system is described to present the context of research. Finally, boundaries chosen to analyse the phenomena are explained.

Chapter 2 is the literature review which identifies the key issues outlined in the body of knowledge addressing the research problem. The chapter introduces a conceptual framework that combines different elements relating to the research aim, proposing an initial assumption about the PMF. The chapter ends with the extended
introduction of the research aim and research questions in the light of the reviewed literature.

Chapter 3 explains the choice of methodology and method used to collect the data which is an action research completed by a series of steps. The chapter provides the details about each step carried out to complete the research including data collection and analysis, verification of the interim results, and validation of the PMF.

Chapter 4 provides the data analysis, explaining how the qualitative data was interpreted to create the PMF. In this chapter, by comparing the analysed data with the concepts identified during the literature review, the required components of the PMF are articulated.

Chapter 5 explains the PMF and elaborates on its components regarding the research questions along with a discussion of findings generated from the construction of the PMF.

Chapter 6 concludes the thesis by explaining the findings corresponding to the research questions, the contributions made to the literature and implications for practice. The final chapter also describes the limitations of this research and highlights the directions for future studies. It ends with concluding remarks about the elements underlying the CHS performance management.

Summary

This chapter has described the public sector background in New Zealand where the NPM implies managing and measuring of various dimensions of contractors’ performance. The research problem is described that informs the research aim and research questions. The chapter next explained the process of searching and selecting the relevant literature. The justification for studying the CHS performance management was discussed together with the research method, which is action research. The chapter also provided an overview of the New Zealand health and disability structure followed by presenting the health and disability strategy, and an overview of funding and performance control at DHB level. The research boundaries indicated the focus of the study. Lastly, a roadmap to the thesis introduced the structure of this thesis.
The next chapter reviews the body of knowledge in the relevant literature addressing the required elements of the PMF.
2 Literature Review

This chapter starts with a brief discussion about fundamental theories of inter-organisational relationships (IORs). Next, it analyses the research problem literature encompassing theories and concepts associated with the aim of the study. The chapter explains the research aim and questions in the context of the literature. Then, a conceptual framework is outlined that encapsulates the concepts relevant to the construction of the intended performance management framework (PMF).

2.1 Introduction

The previous chapter introduced the research and its context. This chapter reviews the extant literature addressing various aspects of performance management, specifically, in the area of health services contracting. Figure 2.1 presents the tree structure of the literature review.

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**Figure 2.1 Structure of the Literature Review**
Underpinning the tree structure in Figure 2.1 are the fundamental theories and concepts of inter-organisational relationships (IORs) which are discussed first and the lower part of Figure 2.1 lists these as system and contingency, contract and principal-agent, management and management control, and quality of service.

The next four boxes contain the research problem literature starting from the lower part of Figure 2.1 with NPM as the context (box number 1), performance measurement and management (box number 2), stakeholder analysis (box number 3), and quality of health care services (box number 4). These four strands are analysed in section 2.3 to identify the necessary components of a framework for performance management of contractors providing community health services (CHS). The callout boxes (shaded dark blue) in Figure 2.1 indicate the role of each strand in relation to the proposed research questions.

The concepts extracted from the literature are summarised to outline the elements required in a PMF. The research aim and questions are explained in the light of reviewed literature. Finally, the initial understandings of the elements constituting the PMF are conceptualised as a conceptual framework.

The next section discusses the fundamental theories and concepts of IORs when service is the subject of the transaction.

2.2 Fundamental Theories and Concepts

This section briefly outlines some key theories upon which controlling the performance of contractors is built up. These theories and concepts provide background information about what constitutes performance management in an IORs setting when the transaction is service. To further summarise the discussion, every two theories are presented together regarding the affinity between them.

2.2.1 System and Contingency

Von Bertalanffy (1956), the founder of systems theory, anatomised an organisation as a complex social system that is internally made up of interacting and interrelated parts. Externally, the system exists in an environment, with which it interacts. The environment contains the external factors affecting the organisation and being affected by the organisation's operations. This reciprocation requires managers to plan and align their activities with external factors to deal with the uncertainties imposed by the environment (Child, 1972).
To manage the uncertainties surrounding a system, Woodward (1958) proposed contingency theory, arguing that there is no best way to organise a corporation, lead a company, or make decisions. Rather, the optimum course of actions is contingent upon the internal and external environment of an operating entity, implying the need for dynamic approaches to organisational management.

Both systems and contingency theory permeate the literature on control as will be shown in the remainder of the literature review.

2.2.2 Contract and Principal-agent

IORs are different types of long-term transactions, flows, and connections for desired results that emerge between a firm and one or more organisations in the firm’s environment (Dekker, 2004). The contract is a means of controlling IORs. Coase (1937) emphasised that the contract delineates the limits on the powers of the contractor, and that within these limits, the provider can manage the various dimensions of performance. Complementary to the issues of governing IORs, Transaction Cost Economics (TCE), developed by Williamson (1979), argues that most enduring IORs are not established or maintained free of additional costs such as specific investments, coordination, and monitoring.

Principal and agent theory explains the issues of purchaser-provider relationships. Jensen and Meckling (1976, p. 308) define an ‘agency relationship as a contract under which one or more persons (the principal [s]) engage another person (the agent) to perform some service on their behalf which involves delegating some decision-making authority to the agent’. Jensen and Meckling (1976) and Eisenhardt (1989) elucidate that the principal, or purchaser, exerts control mechanisms to safeguard the contractual benefits by limiting the deviant activities of the agent and providing appropriate incentives. The principal-agent theory is widely applied to business research. For example in supply chain management, supplier relationship management examines providers’ performance management in terms of maximising the value of interactions with providers (Lassar and Kerr, 1996).

Management and management control theories provide further insight into various aspects of controlling organisational relationships.
2.2.3 Management and Management Control

In addition to contract and principal-agent approaches, organisational and management theories address managing IORs. Early contributors to organisational and management disciplines (e.g. Pfeffer and Salancik, 1978; Koontz and O'Donnell, 1972; Mockler, 1970; March and Simon, 1958; Fayol, 1949) contended that coordinated actions are needed to enable organisations to have control over diverse interests and limited cognitive capabilities of human actors in addition to environmental uncertainties surrounding organisations. ‘The contingency or situational approach’ in organisation management became, therefore, imperative when Koontz (1980) stressed the role of the given situation in selecting appropriate managerial activities, confirming that there is no ‘best way’ to do things in every situation. It can be, therefore, inferred that managing IORs must be dynamic to adjust to external changes.

Specifically, management control scholars (e.g. Anthony et al., 2014; Simons, 1990; Covaleski and Aiken, 1986) present controlling as a key function of management, interacting with other functions such as coordination, planning, communication, and improvement. However, there are various types of control, depending on the nature of operations. Anthony (1988), distinguished between management control of operating activities and projects, in which the former relates to continuous operations without a discernible endpoint, whereas the latter is about projects with an end point that occurs when a product or service is delivered or completed.

Meanwhile, Anthony (1965) corroborated that management control of an operation deals with different dimensions, among which quality is more challenging due to its immeasurable nature.

2.2.4 Quality of Service

Quality is a controversial dimension of a provider’s performance because it depends on from whose perspective the quality is measured. For this reason, measuring quality is a challenge, to the extent that Garvin (1984) concluded that quality means different things to various stakeholders, making quality a multifaceted phenomenon and difficult to measure. Townsend and Gebhardt (1986) confirm that quality has been segmented into a ‘customer perception’, dealing with the subjective part of quality that is defined by the works of Juran, and
'conformance with performance standards’ as explicated by Crosby (1979). Likewise, Dotchin and Oakland (1992) refer to Edwards (1968), who in 1968 explicated that quality is the capacity of a service or product to meet the consumer’s wants. However, human wants are complex, requiring various features of performance to be in place. Conversely, Smith (1993) conceptualised quality as a relational attribute that can be assessed against accepted standards or the interests of various stakeholders, not just clients.

Other factors that complicate the control of service processes are enumerated, by for instance Dotchin and Oakland (1992), as the intangible nature of service, the inseparability of input and output, difficulty in quantification, and defining measurement, cycle times, customers, and boundaries of the service process.

Various service quality models have been devised, for instance by Grönroos (1984) and Parasuraman et al. (1988), to show which variables influence service quality. In a literature review, Seth et al. (2005) analyse nineteen service quality models and identify six key constructs to service quality improvement. These are: (1) clear customer focus, (2) motivated staff, (3) the definition of service quality and its constructs, (4) effective measurement and feedback system, (5) effective implementation system and (6) efficient customer care system. Given these points, customers’ experiences and perceptions determine the value of rendered services. Placing customers at the centre of service quality measurement aligns with ‘service-dominant (S-D) logic’ proposed by Lusch and Vargo (2006) that embraces the concepts of value-in-use and co-creation of value emphasising that the customer is the centre of value creation.

Despite the insights that service quality models provide into measuring the quality of service, a lack of focus on outcome and impact of some particular services raises concerns about measuring service outcomes. As an example, quality of health services cannot only be judged at the delivery stage, while the outcome of a service, such as patient well-being, is another key indicator (Donabedian, 1966). Quality of Life (QoL) constructs provide a range of measures to indicate the general well-being of a person or society (Felce and Perry, 1995). Therefore, frameworks used to manage health care services must include quality indicators for both the delivery process and patient outcomes.
To sum up, the fundamental theories discussed above reflect that managing the performance of IORs has multiple dimensions. While the contract is the major vehicle to obtain desirable results, it needs proper control mechanisms enabling the purchaser, or principal, to oversee various dimensions of the provider’s, or agent’s, performance including financial and non-financial aspects. Regarding non-financial aspects, quality is the most complex dimension due to the different characteristics of service, as compared with physical products, and multiple perspectives of service stakeholders. Hence, the quality of services requires special attention in performance management of contracted services.

The next section discusses theories and concepts reviewed for constructing the PMF.

2.3 The Research Problem Literature

Diffusion of the NPM and proliferation of the purchaser-provider split triggered the growth of IORs, relying inevitably on contracts and contract governance mechanisms to provide public services (Brown et al., 2006). Simultaneously, public sector agencies have striven to reduce the cost of public services by adopting private sector management techniques (Rhodes, 1996). Pollock et al. (2002) endorse VfM as a method for evaluation of public expenditures via comparing the costs and benefits of investment options. Likewise, Rouse and Putterill (2000) outline VfM as a framework where questions of efficiency, effectiveness, and economy (known as the 3Es performance framework) need to be considered when reducing cost and public accountability are important. The authors argue that the 3Es encourage decision makers to think incisively about input, output, and outcome relationships in public services. In some human services, for example in education, researchers (Harvey and Green, 1993; Schrock and Lefevre, 1988; Ball, 1985) argue that VfM is equivalent to quality, meaning the provision of services with high standard specifications at affordable prices.

Despite the global growth of providing public health service via contracting NGOs, Acerete et al. (2011) point out the lack of research on the outcomes of purchaser-provider relationships. These authors emphasise the necessity of robust assessment of providers’ performance via employing a systematic evaluation of the contract to ensure the results of NGOs’ performance. On the other hand, Porter (2010) evaluates the progression of health care performance improvement as
insufficient. He argues that managing the quality of health services is unlikely to be successful unless it is well-structured to measure and improve services, as well as considering stakeholders’ perspectives on service quality.

Referring to the extent of contractual relationships in public sectors, performance management of contractors is preferred over just measuring their performance (Gerrish, 2016). To understand what components are required in a framework for managing contractor’s performance, four strands of literature are found to be relevant that were revealed in an initial literature search. However, searching for and reviewing the literature were an ongoing activity throughout the study with constant modifications in response to conversations with experts in the field about the CHS performance management.

2.3.1 NPM’s Implications for Managing Contractors’ Performance (box number 1)

As noted in Chapter 1, the major implication of the NPM model was the use of contracts to purchase public services from third party providers which necessitates controlling different dimensions of their performance.

2.3.1.1 Purchase of service contracting

The contract has rapidly grown in the public sector as a vehicle to provide a wide range of services to the population via third party providers. Martin (2007) predicted that by 2010 upwards of 80 percent of all government human service funding would involve contracting, with the largest part of these contracts being performance-based.

Drawing upon the NPM’s key premise on the dichotomy between purchaser and provider, Dean and Kiu (2002) summarise their findings into the framework presented in Figure 2.2. This framework displays the process of performance monitoring in publicly funded services, and the fundamental relationships required to obtain the expected outcomes from the provided service.
The framework distinguishes purchaser, contractor, and customer as key stakeholders, and relationships among them labelled from (a) to (f). Each relationship represents an area of performance management in publicly funded services. Dean and Kiu (2002) discern that performance monitoring has a major influence on quality outcomes. However, from a provider’s perspective, the value of implementing a quality management system is a considerable factor, meaning that the benefits of contracting should outweigh any quality measurement costs enforced by the purchaser.

Under NPM, purchase of service contracting is a working concept for government agencies to provide human services via third party contractors to the population. In turn, this process needs a comprehensive performance monitoring system to ensure that service quality is in compliance with plans, relevant standards, and contract conditions (Kettner and Martin, 1990; Kettner and Martin, 1985). This monitoring of service contracting is followed by identifying corrections required to improve the services and finally ensuring that corrections are implemented. However, Marvel and Marvel (2007) report that contrary to the belief that contracting out increases the monitoring of service provision, measurement of contracted services is surprisingly reduced compared to when a government division provides public services internally by itself. As a justification, the authors believe that for such services, monitoring is either outsourced along with services, or simply reduced.
Monitoring service contracting also highlights accountability for results obtained (process ‘f’ in Figure 2.2). Kettner and Martin (1993) suggest the ‘performance’ approach to service contracting that emphasises accountability for the results, as opposed to the ‘process contracting’ that traditionally focuses on the mechanics of service delivery. Performance contracting is better known as performance-based contracting, or PBC, implying that performance is measured by the results of contracted services, as opposed to holding providers accountable only for the efficient use of resources.

From the above discussion, it is clear that both performance-based contracting and accountability for results convey the same message, that contractors’ performance management also needs to consider the results of services emerging as outcomes and impacts on clients’ life conditions.

2.3.1.2 Performance-based contracting

PBC is an holistic approach to managing human service contracting which intends to clarify and emphasise the desired results at the start of the transaction (Martin and Kettner, 2009; Martin, 2005a). Therefore, PBC conditions payment to the accomplishment of specified results measured by efficiency (outputs), quality (delivery process), and effectiveness (outcomes) of performance. The conditional payment, thus, poses financial risks to the contractor, although ‘PBC does not necessarily require that all contractor compensation be tied to performance’ (Martin, 2005b, p. 74). In other words, the three performance measures may tie at least a portion of a contractor’s payment as well as any contract extension or renewal to their achievements. Therefore, Martin (2007) argues that various levels of contractor’s financial risk depend on how much of the compensation is conditional on the expected level of performance by funding or regulatory agency.

To show the structure underlying service contracting, Martin (2005b) proposes a PBC framework shown in Figure 2.3. This framework encapsulates ‘design specifications’ that indicate how the service should be provided, and ‘performance specifications’, as a more contemporary issue, which specify what is expected for service providers in terms of outputs, quality, and outcomes measures and leaving the how-to up to them.
The lower part of Figure 2.3 compares PBC’s scope of measurement with the traditional approach that places more emphasis on the design of service. It shows the difference PBC makes in traditional service contracting, shifting the focus from design specifications to performance specifications which emphasise what has been provided and achieved. This shift was accentuated by Hood (1995) as a principal attribute of NPM.

The effect of PBC on contractors’ performance is still ambiguous. For example, Martin (2005) reports that a group of US human services agencies which used PBC had been successful in changing the behaviour of providers to focus more on performance. In the Netherlands, Oomkens et al. (2015) examine the consequences of PBC on home-care workers’ job satisfaction level, from which they discovered that PBC has no marked effect on job satisfaction. However, the role of managers must be considered when PBC is implemented because supportive management styles, which are more flexible to home-care workers, for example, can result in higher satisfaction in workers.

Despite the controversies about the effects of PBC on provider performance, this form of contracting points up the significance of accountability for performance and its consequences in the public sector.

2.3.1.3 Performance accountability

Ramanathan (1985) provides a compelling integrated control framework for the succinct evaluation of public service providers. Other researchers (Brown et al., 2006; Brinkerhoff, 2004; Heinrich, 2002; Murray and Frenk, 2000) have provided additional support for this perspective but suggest also considering contextual
factors that influence provider performance (e.g., policy choices or service delivery practices). For example, Murray and Frenk (2000) argue that health systems are not independent closed systems but interact with other social systems like education and the economy. Therefore, defining the boundaries of the health system and simultaneously considering the performance of other systems are essential steps to assessing health system performance. Murray and Frenk (2000) explain that even within the health system, its performance again depends on the performance of the various institutions or subsystems that collectively provide health care services.

Moreover, there is also a call for attention to the interrelationships existing between various areas of accountability in the public sector such as political, financial, and performance when designing PMFs for public contracts. In the context of public health, Brinkerhoff (2004) explains that the performance accountability of the health system is linked to financial accountability, meaning that the financial resources to be accounted for are intended to provide services and benefits for citizens. Notwithstanding, financial accountability’s emphasis is largely on procedural compliance, whereas performance accountability concentrates on results. The author argues that performance accountability links firmly to political/democratic accountability. The criteria for performance include responsiveness to citizens and achievement of service delivery targets. However, Brinkerhoff (2004) argues that there can be conflicting pressures between the pursuit of efficient health system performance and democratic principles of equitable service provision that in many countries have politicised the search for accountability.

A range of outcome-based PMFs have been proposed to enhance the results of public service contracts. Below are three examples of increasing attention to outcome-based performance management in the public sector.

- Wandersman et al. (2000) developed the Getting to Outcomes (GTO) framework which is a detailed method for planning, evaluation, and the accountability of various community-based services. In addition to traditional accountability tools such as reporting, GTO embraces the underlying philosophy of CQI to assess and generate feedback on planning, implementation, and outcomes that can be used in service improvement.
• Heinrich (2002) advances the notion of outcome-based performance management in order to stress that governments are accountable for outcomes of public services rather than only inputs and cost reduction efforts.

• Friedman (2009) devised a Result-based Accountability (RBA) framework that provides public purchasers with a taxonomy of performance measures around four categories based on the intersection of ‘quality’ and ‘quantity’ versus ‘effort’ and ‘effect’. In sum, the RBA framework can be used to produce measurable improvements for clients and communities via concentrating on the results of service.

Although these frameworks concede the role of various stakeholders in performance and accountability, none explains who the service stakeholders are. Given the importance of stakeholder identification from performance management and accountability perspectives (Brown et al., 2006), the paucity of stakeholder research on the topic is remarkable (e.g. Porter, 2010). However, this lack of research may reflect more the difficulties of identifying the network of service stakeholders rather than the level of interest in the topic. One possible solution to this deficiency is the adoption of dynamic methods to determine divergent stakeholders involved in different stages of service provision.

2.3.1.4 Accountability’s impacts on provider performance

Recent studies stress that despite the advancements in public service contracting, the phenomenon is still a complex process for public purchasers, providers, and other stakeholders.

Allen et al. (2014) argue that using contracts alone is insufficient to improve providers’ accountability for deployed resources. The authors suggest hierarchical mechanisms such as performance targets to clarify expectations for providers. In another study, Amirkhanyan et al. (2013) point out the lack of attention to the impact of contextual factors on performance assessments by various stakeholders of a single service which may result in different conclusions.

The deficiency of formal control mechanisms to measure and improve providers’ performance draws attention to applying relationship management approaches to enhance communication with contractors. Public management
researchers contend that relational contracting featuring collaboration, communication, and trust has become a popular means of contractor performance management through emphasising close relationships between the public purchaser and provider (e.g. Dwyer et al., 2014; Van Slyke, 2007; Brown et al., 2006; Van Slyke, 2002). Nonetheless, Porter et al. (2013) advocate that managing the relational contracts still needs frameworks to enable public purchasers to improve the performance of health service providers.

Managing human service organisations is inherently paradoxical as it encounters conflicting issues. Hasenfeld (2015) argues that the mission of human services is to fulfil population needs whereas business management practices, such as accountability and outsourcing disseminated by NPM, put pressure on managers to follow cost-saving strategies which can contradict the philosophy of human services. Another contradiction in human service management stems from the need to maintain a balance between spending on accountability requirements, mandated by public funders, and investment in service improvement for clients and staff development.

Likewise, other researchers (Carnochan et al., 2014; Liket et al., 2014; Tenbensel et al., 2014; García-Iriarte et al., 2011), studying the impact of public accountability on NGOs’ capabilities to respond their clients’ needs, highlight the significance of balanced accountability. The belief is that providers’ resources can be better used to develop outcome measures that help staff to make better decisions and create value for the clients as long as the burdens of funder accountability are reduced.

To find this balance between accountability to the public funder and clients, the role of the funder in supporting providers to improve their capability to evaluate service outcomes is important. Particularly for non-profit organisations, the problem of accountability can be even more complicated since there are often multiple funders. For example, Lee and Nowell (2014) describe how these organisations receive funding from different sources (e.g. corporate donors, government grants and contracts, commercial enterprise, and foundation grants and contracts), and each funder has diverse interests in performance. Consequently, a non-profit provider can be under pressure from various funders to meet their diverse accountability requirements. Thus, funders may oblige the providers to demonstrate that they are
complying with contractual requirements by providing diverse forms of performance information (Carman and Fredericks, 2010; Carman, 2007).

Despite the emphasis on the relationship between providers and their clients, as a key accountability relationship, Benjamin (2013) discerned that clients have a more ambiguous standing than other stakeholders. This ambiguity is because most providers’ staff see measuring outcomes as fulfilling contractual requirements instead of something they do to ensure they are responsive to the needs of clients (Benjamin, 2013; Carman, 2007). In other words, outcome measurement must be deemed as a mechanism to promote transparent accountability between service providers and their clients and to assess whether clients are better off as a result of the provider’s performance.

To improve client accountability, Benjamin (2013) suggests, firstly, client engagement in outcome measurement and conceptualising quality to the extent that both sides have the same perception of service quality. Secondly, further investigation is necessary to examine the impact of different outcome measurement models on the provider-client relationship. Regarding accountability tension, Benjamin (2013) also reports that development of an outcome measurement system for clients that needs more investment may reduce providers' capability to stay accountable to other key stakeholders, namely funders. Another problem with client participation may be a trade-off between clients’ expectations with funding and contractual requirements, organisational priorities and limited resources, which can lead to unmet expectations and consequently meaningless participation.

Hasenfeld (2015) summarises the limitations of comprehensive accountability in some contradistinctions such as effectiveness versus efficiency, organisational autonomy versus funder controls, or clients choice versus standard service. It can be, therefore, inferred that a PMF designed for managing providers must consider maintaining a balance between accountability requirements, imposed by various stakeholders, and providers’ resources needed to develop their capabilities to improve clients’ outcomes.

2.3.2 Performance Measurement and Management (box number 2)

Numerous systems and frameworks have been proposed for assessing and managing organisational performance, among which some are postulated by
management accounting scholars (e.g. Kaplan and Norton, 1992; Fitzgerald et al., 1991; Johnson and Kaplan, 1987), and some are devised by researchers in operations and production management (e.g. Gunasekaran et al., 2004; Neely et al., 2002; Medori and Steeple, 2000; Ghalayini et al., 1997; Lynch and Cross, 1991; Sink and Tuttle, 1989).

According to Chenhall and Langfield-Smith (2007), the choice and design of performance measures are addressed across management accounting, operations management, marketing, human resource management, and strategy. Despite the diversity of areas, the prevalent message of these frameworks, or systems, is the need to properly measure the different dimensions of organisational performance, either in product or service industries, against the predetermined goals and objectives aiming for performance improvement.

This section does not provide an exhaustive review of all the systems and frameworks proposed in management accounting or other fields. Rather, it describes the key components and principles proposed to set forth a performance management framework, particularly, for IORs in the public sector where the performance of contractors is assessed against multiple criteria as well as stakeholders’ expectations. Thus, an overview of definitions and general design principles for performance management systems and frameworks is presented. This discussion is then focused on requirements in public performance management which are reflected in the previous section, such as outcome measurement.

2.3.2.1 Performance management versus performance measurement

Performance management and performance measurement are differentiated. The distinction between these two is important since this research aims to contribute to the debate on performance management, but specifically to performance management of CHS contractors. In Figure 2.4, Lebas (1995) shows that performance management precedes performance measurement and gives it meaning while measurement and management are not separable. Therefore, a PMF encapsulates measures to appraise the performance along with other managerial methods and techniques (e.g. training, teamwork, stakeholder involvement, etc.) to improve the performance (Lebas, 1995).
Figure 2.4 Performance Management and Performance Measurement Are Closely Intertwined (Lebas, 1995, p.34)

Folan and Browne (2005) who reviewed the evolution of performance measurement systems, declare that performance measurement has gradually evolved into performance management of IORs, embodying performance information and a set of managerial actions which intend to improve performance via changing goals and processes (cf. Bititci et al., 1997).

A performance management system, essentially, encompasses and supports measures that: (1) consider personnel’s autonomy; (2) reflect the causality of actions; (3) increase participation; (4) support learning for continuous improvement and, (5) improve future decisions (Chenhall, 2003; Otley, 1999; Simons, 1995). As part of this, performance measurement systems are a selection of cost and non-cost performance measures that provide information about deviations between actual performance and desirable performance set by strategy (Tangen, 2004). Albeit, this definition better explains intra-organisational performance measurement whereas measuring performance in an IORs setting is more complex and requires even more research regarding different sectors. The reason that Folan and Browne (2005) discern is that IORs performance measurement has been concentrated mainly in supply chain management rather than in other sectors such as public service contracting which inherently pursue a different mission in performance.

After providing the above background, design principles and dynamic features proposed to construct PMFs are reviewed next. Reviewing these propositions made in the literature helps to articulate the required components of the PMF while also analysing whether or not there are additional concerns to develop the field of performance management.
2.3.2.2 Design principles of a PMF

Design principles for performance measurement systems and frameworks have been extensively proposed (Neely et al., 2005; Bourne et al., 2000; Neely et al., 2000; Otley, 1999; Neely et al., 1995; Anthony, 1965). Some of these principles apply to every PMF such as:

1. incorporation of contextual factors and stakeholders to establish a stronger fit between environmental uncertainty and performance evaluation (Govindarajan, 1984),
2. considering stakeholders’ satisfaction as a performance objective (Atkinson et al., 1997),
3. differentiating performance determinants – ex-ante – from performance indicators – ex-post (Neely et al., 2000; Fitzgerald et al., 1991; Ramanathan, 1985), and
4. considering common or system-wide measures and unique measures which are specifically tailored to a service or business unit (Lipe and Salterio, 2000).

Essentially, a PMF comprises a set of critical success factors, or CSF (Rockart, 1979), and performance measures set to achieve the vision, goals, and objectives mapped out in the strategy (Kaplan and Norton, 1992). Specifically in public management, performance indicators are measures of the productivity, quality, timeliness, effectiveness, and cost-effectiveness of performance (Kopczynski and Lombardo, 1999; Wholey and Newcomer, 1989). One approach is to set specific, measurable, attainable, realistic, and time-related (SMART) performance goals and objectives, as Doran (1981) sets forth, being criteria for also defining performance indicators (e.g. Arah et al., 2003).

Focusing on design and use of performance management systems, Ferreira and Otley (2009) extended the framework which Otley (1999) initially configured to analyse the operation of management control systems. The extended framework, therefore, articulates 12 principles including: (1) clear and well-communicated vision and mission; (2) CSFs; (3) organisation structure and its impact on the PMS; (4) strategies and plans; (5) key performance measures; (6) performance goals; (7) performance evaluation processes; (8) rewarding; (9) information flow structure;
(10) usage of performance information; (11) dynamic features of the PMS, and (12) the cohesiveness of the performance management system’s components.

Drawing on these principles, Broadbent and Laughlin (2009) stress the role of contextual factors in designing the control systems which indicate the selection of transactional and relational ties in developing PMFs. While a transactional PMF is established on predetermined and structured components (i.e. vision, critical success factor, and measures), a relational PMF goes further and considers communicative rules in which performance elements are consensual. The need to consider contextual factors raised by Broadbent and Laughlin (2009) as a design factor, has also been discussed by public management scholars within the relational contracting literature. Both groups suggest that managing provider performance, instead of strict transactional regulations, can alternatively adopt communicative and collaborative approaches. However, the choice of transactional versus relational PMF depends on the context in which performance is undertaken and stakeholders’ agreement with the means of measurement.

Among the above principles, dynamic features of a PMF are another concern that addresses the question of ‘How have the performance management systems altered in the light of the change dynamics of the organisation and its environment?’ (Ferreira and Otley, 2009, p.275).

2.3.2.3 Dynamic feature of a PMF

Further to its major components, a PMF should be integrated, covering multiple dimensions of performance (Chenhall, 2005; Kennerley and Neely, 2003; Bititci et al., 1997), as well as fulfilling diversified stakeholders’ needs (Rouse and Putterill, 2003; Neely et al., 2002). However, Ghalayini and Noble (1996) argue that integrated performance measurement frameworks lack dynamic characteristics in measurement, particularly integrating continuous improvement and the role of time in measurement. To bridge the gap, a PMF must also comprise dynamic features to adjust to changing circumstances (Ferreira and Otley, 2009; Kennerley and Neely, 2002; Laitinen, 2002; Bititci et al., 2000; Ghalayini et al., 1997; Ghalayini and Noble, 1996).

Figure 2.5 exhibits two examples of dynamic structure for performance management and control systems.
On the left side of Figure 2.5, Anthony (1988) developed a dynamic model of the management control cycle in operating organisations where the performance is ongoing without a determined lifetime, as opposed to projects. This model shows that management control has two cycles and that the first one begins with a strategy which is implemented through programming. Although Anthony had not explicitly referred to the PDCA, his model applies the PDCA structure to an ongoing process where improvements are made to the current plan. The second cycle is more an operational level when programmes are conducted via annual planning, execution, evaluation, and revisions made to adjust plans (marked area in Figure 2.5).

On the right side of Figure 2.5 is the dynamic performance measurement system model that Bititci et al. (2000) propose to illustrate active monitoring of changes, occurring inside and outside an organisation, which is completed by appropriate adjustment of objectives and processes to ensure improvements are achieved.

Both models show a cyclic structure to accentuate that performance measurement and management must adopt dynamic approaches to deal appropriately with changes. A closer look at these models reveals that dynamic performance management embraces the concept of an open system, implying that organisations actively interact with the external environment and need to adjust their performance to changes occurred in their surroundings. What distinguishes the
two models is that Anthony considered the role of time in performance management by placing annual planning at the beginning of the operational cycle.

Nonetheless, both models use the Plan-Do-Study-Act (or PDCA) cycle. While Bititci and his colleagues explicitly use that to show how a dynamic performance measurement system works, Anthony implicitly used it to portray the dynamism of management control. In the health sector, the PDCA has also been used as a model for improvement and testing changes, but only on a project scale (Beitsch et al., 2015; Rosati, 2009; Langley et al., 2009; Baker et al., 2001).

Both models reflect performance management in an intra-organisation setting while in an IORs setting a dynamic structure is also required. In the public sector, change dynamics are imposed by external factors as well as stakeholders who can be relatively more, in number, than in the case of intra-organisation. The existence of a large number of stakeholders, pursuing divergent interests, puts further pressure on performance management to fulfil diversified expectations for performance.

In summary, designing a PMF is based on a set of principles which are substantially agreed by most researchers in performance measurement and management. Among these principles, integration and dynamic structure of a framework are inclusive traits because integration indicates the extent to which various dimensions of performance, as well as factors which impact on it such as stakeholders, are covered. Meanwhile, the dynamic structure reflects whether a PMF considers the need for responding to environmental dynamics and adjusts performance to the new condition, or in other words, does the PMF inspire a continuous improvement approach to the performance management process.

2.3.2.4 Design of a PMF in the public sector

In the public sector, measuring the performance of providers is inextricably linked with accountability of fund holding purchasers to make the trade-offs between cost and quality of public services (Brignall and Modell, 2000; Ballantine et al., 1998). The role of accountability issues and service stakeholders’ views in public performance management has been discussed in this chapter (under NPM’s implications) that distinguishes performance management in the public sector from the private sector.
Radnor and McGuire (2004) reported that the public sector predominantly relies on performance measurement, rather than management. Halachmi (2011) and van Helden et al. (2012) also emphasise this deficiency and analyse this as being due to overemphasising cost and performance measurement instead of applying holistic performance management approaches. As an example, Ryan (1999) compared contracting arrangements in Australia, Canada, and New Zealand and found that New Zealand contracts had relied mostly on numerical counts of activity rather than effectiveness or post-delivery outcomes. As will be discussed in Chapters 4 and 5, in this study we found similar evidence that, despite acknowledging the deficiencies in volume-based driven contracts and relying on numbers, the problem persists, which calls for a shift in attention to outcomes when assessing the contractors’ performance and their service quality.

The design principles for public performance measurement frameworks are similar to those in business (Van Dooren et al., 2015), except for the emphasis placed on outcomes and values of public services (Nielsen, 2013; Kravchuk and Schack, 1996). Bao et al. (2013) stress value is an overarching goal for public services to justify the performance of the public sector. Hvidman and Andersen (2014) sum up that fundamental differences between the public and private sectors make the method of managing performance subject to the sector to which it applies.

Boland and Fowler (2000) used a system perspective to examine public services, in which public service organisations are assumed to be dynamic systems requiring public managers to measure the 3Es together to evaluate VfM. Figure 2.6 shows the linkages between the three components of the VfM. Importantly, as circled in the figure, measuring outcomes rests on differences between clients’ needs and delivered service.
Outcomes, particularly, are of high concern to stakeholders in the public sector to the extent that ‘it is more important to do the right things than to do things right’ (Boland and Fowler, 2000, p.427).

In a similar vein, Behn (2003, p.594) asserts that public managers aim to measure outcomes to answer the ‘effectiveness question: did the agency achieve the results it set out to produce?’. However, Behn (2003) argues further that outcome is indeed different from impact since contextual factors (e.g. economic conditions) may alter the agency’s outcome. Hence, public managers need to ask the ‘impact question: what did the agency itself accomplish?’ The responses to this type of question will then indicate how, for example, a CHS would probably affect participants’ lives on a community scale (Martin and Kettner, 2009).

The presence of multiple stakeholders in the public sector, each with a potentially contradictory set of demands, necessitates performance measurement systems to include those stakeholders’ views to manage performance (Newcomer and Caudle, 2011; Fryer et al., 2009; McAdam et al., 2005; Behn, 2003). De Lancer Julnes and Holzer (2008) clarify that the purposes of measuring performance are policy improvement, and a means of communication with external stakeholders, implying that performance measurement is not an end in itself, but a means to an end.

In defining performance measures, Bolton (2003) affirms that measures are required to determine the degree to which an agency fulfils the public service missions. He explains further that the results can be compared with desired performance or used to establish time series measurement that shows the trend of performance over time. Therefore, performance indicators are required to be well-
defined according to the economic and political context, in which the performance is being undertaken. In health services, Perera et al. (2007) scrutinised the development of the indicator appraisal tool and discussed its use to assess the quality of the proposed national indicator set for primary health care in New Zealand. The authors conclude that their findings are applicable to other health care systems. They summarised that generating a performance indicator requires considering that:

1. introduction of any indicator must be relevant to current policy and available evidence of best practice linked to improved health outcomes;
2. the definition of the indicator is dependent on the perspective from which the indicator is derived such as cost containment or quality improvement;
3. technical qualities and the simplicity with which an indicator may be implemented in any situation determine its usefulness.

Nonetheless, as Dean and Kiu (2002) also stress, there is not a ‘best’ approach to managing performance in all contexts or a magic measure applicable for all purposes. Finding the best approach to performance management is not only impossible in the private sector, but it is also implausible in the public sector where even more heterogeneous collections of measures are required (Behn, 2003).

A final concern in designing performance management and control systems for IORs is the interdependency of intra-organisational conditions, involving an organisation’s staff culture and working practices, and inter-organisational business relationships that are normally established via contractual arrangements (Saliterer and Korac, 2013; Carlsson-Wall et al., 2011). Indeed, the internal conditions of an organisation have an impact on the quality of performance information provided to external parties. It can, therefore, be argued that organisational capacities of providers – including intra-organisational systems, culture, and working practices – are imperative to public purchasers because they impact on providers’ performance and the way it is reported to external stakeholders.

Highlighting the interdependency of intra- and inter-organisational performance management implicitly refers to the earlier discussion about service providers’ capacities affecting their abilities to improve outcomes which can be depleted under the pressure of funder accountability mandates.
2.3.2.5 Evaluation of outcomes to improve performance

While outcome-based performance management is an important approach to improving public services, programme evaluation is the method along with other measurement techniques to analyse service outcomes and impacts (Heinrich, 2002). Programme evaluation is a systematic method to evaluate the effectiveness and efficiency of projects, policies, and programmes (Wholey et al., 2010; Rossi et al., 2004). Similar to performance measurement, programme evaluation must include key stakeholders’ expectations and interest in how well a programme functions (Owen, 2006; Rossi et al., 2004; Gabor and Grinnell, 1994).

Outcome evaluation is a process of assessing results ensuing from an intervention over time (Carman, 2010). The researchers of community-based services emphasise measuring outcomes in short-term, medium-term, and long-term\textsuperscript{11} (Benjamin, 2013; Knowlton and Phillips, 2012; García-Iriarte et al., 2011; Carman, 2010; Martin and Kettner, 2009; Kettner and Martin, 1993). The classification of outcomes implies that a service may change the client’s condition incrementally, as opposed to immediately after completion.

The Programme Logic Model is a tool used by funders, managers, and evaluators of programmes to evaluate the effectiveness of a programme, indicating plausible outcomes of a designed service using certain resources within a specific context (Rogers et al., 2000; Bickman, 1987). Programme logic models have been used by public service planners and researchers, being an instrument to visualise the resources required to support a programme’s activities and produce outputs which are necessary to obtain the intended outcomes and impacts of a programme (Brest, 2010; Cooksy et al., 2001).

McLaughlin and Jordan (1999) state that programme managers excessively use logic models to meet accountability requirements and stakeholders’ expectations for results. The authors explain further that logic models have also been found useful tools to implement continuous quality improvement. For example in Canada, Watson et al. (2004) propose a Results-based Logic Model for Primary Health Care (PHC) that takes into consideration the impact of contextual factors and health system’s stakeholders on the efficiency and effectiveness of PHC.

\textsuperscript{11} The United Way of America initially proposed this classification of outcomes measurement.
Measuring outcomes is, however, burdensome for service providers (Liket et al., 2014; Tenbensel et al., 2014). Carnochan et al. (2014) argue that three challenges of outcome measurement faced by CHS providers relate to outcome definition, data systems to capture outcomes, and organisational structures and processes for performance measurement. ‘One of the most complex challenges involves finding methods for measuring change that are appropriate for a diverse array of clients, and account for the time needed to develop trust between staff and clients’ (Carnochan et al., 2014, p.1027). The issue has raised concerns about helping service providers in evaluation capacity building via improving their organisational performance by learning from their work to meet their funders’ demands for accountability and clients’ expectations (Benjamin, 2013; García-Iriarte et al., 2011; Carman, 2007).

Performance measurement and programme evaluation are distinguished as separate subjects although the difference is unclear (McDavid et al., 2012). For example, McDavid et al. (2012) explain that performance measurement is a managerial tool for assessing the programme’s performance which is a straightforward process whereas programme evaluation often requires myriad techniques and specialities, making evaluation complicated. Moreover, Kettner et al. (2012) argue that programme evaluation is not concerned with reporting results to external stakeholders, unlike performance measurement. The authors continue that programme evaluation does not focus on the implementation process, as monitoring does, whereas it assesses the outcomes and impacts after completion and uses feedback information and data to improve policy and planning.

Despite these differences, various authors (Van Dooren et al., 2015; Carnochan et al., 2014; Johnsen, 2013; McDavid et al., 2012) believe that performance measurement and programme evaluation can be used complementarily in order to improve quality of services. Kettner et al. (2012) also state that performance measurement and programme evaluation both constitute feedback that leads to changes, refinements, and improvements.

To sum up, the specific concerns determining the design of a PMF for public services are:

1. accountability relations with key stakeholders, predominantly funder and clients, which also require a balanced approach to sufficiently satisfy both;
(2) the abundance of external stakeholders compared with when performance management deals with intra-organisational purposes;

(3) service outcome is the dominant measure indicating service effectiveness;

(4) a provider’s (organisational) capacity affects its ability to measure and improve outcomes, for staying accountable to clients, while being responsive to funder’s demands for accountability;

(5) performance evaluation that identifies underlying reasons for actual results takes one step further than the measurement and is clearly necessary to improve service outcomes.

2.3.3 Stakeholder Analysis (box number 3)

Thus far, the significance of considering the stakeholders’ views on performance in the management of contractors has been highlighted in this chapter. Hence, this section considers how stakeholders are defined, methods of identifying and ranking them, and the role and extent of stakeholder engagement in health service process. Particularly, the focus is on stakeholders of IORs where the abundance of players find network approaches more appropriate as they identify stakeholders, in terms of interest and influence, instead of solely relying on power and resources of entities.

Stakeholder theory was initially developed by Freeman (1984) who outlines how management can satisfy the interests of stakeholders in business. A ‘stakeholder in an organisation is (by definition) any group or individual who can affect or is affected by the achievement of the organisation’s objectives’ (Freeman, 1984, p.46). Stakeholder identification has been influenced by various approaches towards organisational linkages with internal and external partners, among which organisation theories (e.g. Frooman, 1999; Mitchell et al., 1997) and network theory (e.g. Rowley, 1997) are common ones. These approaches are briefly discussed next to prepare the ground for explaining stakeholder identification in CHS.

Mitchell et al. (1997) proposed a ‘theory of stakeholder salience,' based on a resource dependence perspective (Pfeffer and Salancik, 1978), which suggests that stakeholders are identified based on their power, legitimacy, and urgency. The theory then proposes a typology based on normative assumptions defining eight classes of stakeholders from definitive to non-stakeholder (Mitchell et al., 1997). Indeed, the typology is a means to prioritise stakeholders depending on the extent of
the three attributes each stakeholder holds. Despite the popularity of this theory, Neville et al. (2011) criticise it, arguing that the three attributes are not definitive because the organisational environment and the attributes of stakeholders can change.

2.3.3.1 Network perspectives

Rowley (1997) postulates a ‘network theory of stakeholder influences’ drawing on concepts from social network analysis to examine an organisation’s network structure instead of dyadic ties. Unlike resource-dependent theorists, proponents of relational approaches advocate that power stems from relationships that organisations establish with other actors, rather from individual attributes of the actors (e.g. Neville et al., 2011; Frooman, 1999; Rowley, 1997). The network approach is considered a substitute for contracting dyads (Amirkhanyan, 2009; Stoker, 2006; Agranoff and McGuire, 2001), particularly when multiple organisations are involved in public services necessitating well-coordinated relationships (Provan and Kenis, 2008; Reid, 1964).

By growing the number of public service stakeholders pursuing divergent interests, the network approach has become prevalent in CHS to the extent that Provan and Milward (1995) proposed a ‘theory of inter-organisational network effectiveness.’ This theory elucidates that as CHS are often provided via a group of organisations who need to coordinate their actions, if the overall well-being of clients is a goal, then effectiveness must be assessed at the network level. Networks provide more accurate information for managers to identify actors who, according to Neville et al. (2011), may have unrealised power to influence the organisation’s performance. An example of this type of stakeholder can be the role of physicians in health service quality (Barron et al., 2005; Blumenthal and Epstein, 1996), and their influence on relationships among other stakeholders, such as purchaser and providers, is unlikely to be associated with the Mitchell et al. (1997) three attributes. The main reason is that some stakeholders hold different sources, such as knowledge, that makes them influential in a process which is also subject to change depending on the specific stage in the service process.

Some community health researchers agree that using a network approach to identify CHS stakeholders leads to recognising dormant players whose collaboration can enhance services (Provan et al., 2013; Butterfoss et al., 2008;
Provan et al., 2007; Hill, 2002; Bazzoli et al., 1997). Nonetheless, Bolland and Wilson (1994b) argue that coordination of planning, delivery, and administrative relationships in CHS are heterogeneous and contain various degrees of difficulty. That is, planning coordination is found to be the hardest to achieve, whereas delivery is the easiest and administration falls somewhere in between. This is because service delivery is more integrated in terms of agreed practices among providers while planning activities are fragmented as they are influenced by philosophical and policy issues where not all stakeholders necessarily agree with the details of planning.

2.3.3.2 Stakeholder identification

Identifying stakeholders and, equally important, determining their position within the network is complex, requiring iterative processes (Reed et al., 2009; Varvasovszky and Brugha, 2000; Rowley, 1997; Pouloudi and Whitley, 1997).

Bryson (2004) and Bryson et al. (2011) provide a thorough list of methods for evaluation and stakeholder identification and analysis, each of which is suitable for a specific purpose and to uncover particular aspects of stakeholders. Stakeholder mapping is one of these methods which, as Bryson (2004) explains, can be conducted by using diagrams and problem-frame stakeholder maps that categorise stakeholders of an operation into groups. Although using the term ‘map’, most of them provide a typology showing the stakeholders’ positions compared to each other considering a set of specifications (e.g. power versus opposition-support grid or stakeholder-issue interrelationship diagram). Hence, the conventional stakeholder mapping may not reflect all existing relationships. Nonetheless, some of its techniques can be later used to rank stakeholders who are identified by other techniques, for example, process mapping.

When analysing a network of stakeholders, the level of analysis must be indicated to show which stakeholders are identified. For that reason, Provan and Milward (2001) propose a framework for evaluating organisational relationships in the public sector. This framework presents three levels of network analysis comprising community, network, and organisation, which indicate key stakeholders at each level. The community is the broadest level that comprises service clients. A network is a collection of programmes, projects, service, and providers that
cooperate to serve the community. Lastly, the organisation/participant level contains the independent providers who operate within the network.

It can thus be concluded that stakeholder identification in a wide area, such as the public health sector, needs a suitable approach to identifying all players impacting on the service process, or being impacted by it, who may not be easily identifiable by their power or other resources. On the other hand, Reed et al. (2009) remark that the majority of identification techniques are static and fail to consider the changing nature of stakeholders. This study found that the process map enables identifying stakeholders according to their role in service provision and also indicates who is involved in which stage of service.

2.3.3.3 Process mapping to identify stakeholders

As discussed above, stakeholder mapping may fail to identify stakeholders without noticeable resources. Instead, process mapping can be a substitute technique although its original purpose is different.

In service marketing, Shostack (1984) proposes service blueprinting which is a method of visualising every step of a service process and has been used in different research fields where the aim is to scrutinise performers and steps constituting a service process. Zeithaml et al. (1990) explain that a service blueprint is essentially a detailed map or flow chart of the service process that is a useful tool for designing quality into the service. Likewise, process mapping in operations management helps to map out the process’s flow and to understand how customers and service providers interact at each step of the service delivery process (Samson and Singh, 2008). Both techniques are used to capture and visualise a process and its sub-processes undertaken by different performers.

One advantage of process mapping is to visualise the relational structure among stakeholders who contribute to a final aim. Moreover, process maps determine the number of ties each stakeholder has established for the process and its aim reflecting the importance of each stakeholder in achieving the aim. The illumination of ties can also help to understand the ‘centrality’ of the stakeholder and the ‘density’ of its relations with other parties, two criteria suggested by Rowley (1997) to identify key stakeholders in network contexts. Chapter 4 provides more details about how process mapping was used in this research to identify stakeholders in the CHS areas studied.
Despite the importance of stakeholder identification, similar to performance management, it is not an end itself. Rather it assists in collaboration among various parties to improve performance, for example in the health sector.

2.3.3.4 **Stakeholders’ engagement in the health service process**

Health service researchers point out the need to include different perspectives on quality when developing the performance and quality indicators of health services (Schiller et al., 2013; Campbell et al., 2002; Campbell et al., 2000; Blumenthal, 1996). The need originates from disparate interpretations of what constitutes the quality of health services that, as Porter (2010) and Blumenthal and McGinnis (2015) reflect, requires stakeholders’ collaboration at multiple levels of the health care system to set up goals and corresponding measures.

Lega et al. (2013) argue that during the last decade costs of health care services have risen, and the recent economic crisis has inflated this increase. In this situation, it can be expected that while health care providers focus on cost containment, other stakeholders (e.g. clients and public purchasers) are conversely seeking improvements in the quality of services.

Stakeholder analysis is similarly considered as a means of health policy making, identifying relevant actors and analysing their influence on decision-making processes (Brugha and Varvasovszky, 2000; Varvasovszky and Brugha, 2000). In addition to health researchers, practitioners are also interested in identifying and engaging stakeholders in improving the health of populations at national and international levels (e.g. Raleigh and Foot, 2010; Smith et al., 2008; World Health Organization, 2006; Hill, 2002).

The multiplicity of stakeholders in health services leads researchers and practitioners to group similar stakeholders into clusters that facilitates answering their homogeneous needs based on the similarity of interests and influences. Both health researchers and practitioners have identified diverse stakeholder groups, considering the type of service or disease and scope of study such as personal health (Blumenthal, 1996), national (Raleigh and Foot, 2010) or international levels (Hawkes et al., 2004). However, despite the variety of stakeholder groups, the dominant groups across various service areas are usually the same. The key stakeholder groups are essentially public funder and purchaser, clinicians (e.g.
doctors and nurses), provider organisations and their staff (either hospitals or community services providers), regulatory and policy making authorities, patient advocacy organisations, and more importantly clients (cf. Kok et al., 2015; Raleigh and Foot, 2010; Aarons et al., 2009).

One common avenue through which to enhance collaboration among health stakeholders is to build up inter and multi-disciplinary teams (MDTs). Using a systems thinking approach, Leischow et al. (2008) highlight the interplay between different components of the public health system which creates complex problems. To tackle the complexities, the authors recommend MDTs as a means to enhance learning and problem solving. Schofield and Amodeo (1999) outline some weaknesses in the development of MDTs, such as a poor description of the teams, and defining measures of teams’ interventions regarding their effectiveness to improve health services quality.

Nonetheless, Valentine et al. (2015) argue that despite the awareness of the positive effect of MDTs on patient outcomes and cost-saving, medical team-working is still lacking. Hence, they call for further investigation to uncover the relationships between teams’ structure and performance with service outcomes. Given its potentiality, MDTs is an area which needs attention from health practitioners as a vehicle to improve service quality alongside the continuum of care (Tousijn, 2012).

Recent studies show an increasing trend in engaging health service stakeholders in planning, implementing, measuring and even researching on a wide range of health and human services (Wilson et al., 2015; Khan et al., 2015; Morris et al., 2015; Mendenhall et al., 2014; Hincheliff et al., 2014). Hence, this tendency extends the notion of stakeholder engagement beyond just building MDTs. For example, Kok et al. (2015) specifically refer to considering organisational networks for identification of stakeholders in the health sector.

On the other hand, Schiller et al. (2013) refer to a lack of systematic process for identifying health services stakeholders in practice. Moreover, despite increasing attention to stakeholders’ roles in the quality of health services, it is not clear yet whether service stakeholders hold permanently the same position in all steps of services having multiple stages.
2.3.4 Quality of Health Care Services (box number 4)

Human Services are provided to people to help them stabilise their lives and find self-sufficiency through guidance, counselling, treatment and the provision of basic needs (National Organisation for Human Services, 2014). Health care and education are two dominant examples. As explained previously, health services can be provided either in a hospital or within the community where people live.

Provan et al. (2002) explain that community-based health and human services target so-called ‘vulnerable populations’ such as the poor, the elderly, the homeless, or individuals with serious mental illness. Such services, hence, include rehabilitation, physical health care, mental health treatment, housing, substance abuse, and more which are provided through groups of organisations who need to work together to integrate their diverse services. In summary, a collaboration between CHS providers may yield higher efficiency and better service outcomes for clients, for example, through finding new ways to reduce or avoid inefficient operations in the delivery of care (McLees et al., 2015; Bentley et al., 2008).

The literature on health service management is extensive (Weisbrod, 1991) and presents diversified criteria for assessing the performance of health systems. Various authors introduce quality as the key dimension of health service performance. However, they define quality in different ways depending on the stage of health service process which is divided into pre-delivery requirements, delivery process, and post-delivery when outcomes of services emerge (e.g. Tompkins et al., 2009; Chalkley and Malcomson, 2000; Campbell et al., 2000).

2.3.4.1 Dimensions of health service quality

Managing the quality of CHS is more difficult compared to hospital services due to conspicuous service boundaries (Wilf-Miron and Shemer, 2004; Sirgy et al., 2000; Bazzoli et al., 1997). Nonetheless, quality of care is an abstruse area to the extent that Maxwell (1992) and Gask (2007) argue that it is extremely difficult to measure. One reason, as Donabedian (1997) indicated, is the existence of more than one single definition of quality depending on the system of care, and the nature and extent of responsibilities. Different aspects of measuring quality are further discussed in the remainder of this section.

Figure 2.7 shows a comparison that Campbell et al. (2000) make between four disaggregated perspectives on quality dimensions.
This comparison reveals that effectiveness which determines service outcome and efficiency that implies the financial performance of the health care performance are dominant dimensions of quality across the four selected perspectives.

Performance measurement of health services relies on integrated methods to coherently assess service quality. For example the Structure – Process – Outcome framework developed by Donabedian (1966) for assessing the quality of health care is predominantly used to improve the quality of medical services. Structural measures are the characteristics of the resources employed in the health system. Processes denote what is done to and for a client. Outcomes are the results of care or the effect of service on the status of clients and population. Figure 2.8 exhibits the framework that Donabedian devised for measuring the performance of health services concerning factors affecting performance in pre-, during, and post-delivery.

Numerous frameworks have been proposed for measuring health system performance (Murray and Frenk, 2000). Several of these frameworks emphasise the continuous improvement of health service quality (e.g. Reyes-Alcázar and

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Almuedo-Paz, 2012; Kennedy et al., 2011; Gauld et al., 2011; Martin et al., 2007; Barron et al., 2005; The U.S. Institute of Medicine, 2001; Blumenthal and Kilo, 1998; Shortell et al., 1998; Milakovich, 1991; Kamis-Gould, 1987).

Other frameworks highlight the importance of employing change and intervention management principles (e.g. Wensing et al., 2009; Atun et al., 2009; Campbell, 2008). Some, however, point to the role of financial incentives in quality improvement that link incentives to outcomes for stimulating quality improvement (e.g. Tompkins et al., 2009; Petersen et al., 2006; Rosenthal and Frank, 2006; Dudley et al., 2004; Rosenthal et al., 2004). Also, there is another group using system approaches including complex adaptive systems and simulation where the primary objective is a better understanding of the health system’s operation (e.g. Brailsford et al., 2009; Leischow et al., 2008; Anderson et al., 2003). Although these frameworks are differentiated, their purposes are uniformly quality improvement across the continuum of care and for clients and communities (McLees et al., 2015; Beitsch et al., 2015; VanLare and Conway, 2012).

2.3.4.2 Measures of health service quality

Regarding quality measurement, different views among various stakeholders about what indicates a good quality service divide measures into several categories (Loeb, 2004). Among these views, two groups are outstanding. A ‘process-based’ approach which expresses that quality is the measure of providers’ actions (e.g., Rubin et al., 2001; Palmer, 1997). Then, an ‘outcome-based’ approach that contends that results of service delivery define quality of care (Lohr, 1988; Hunt et al., 1985; Gilson et al., 1975). Health outcomes are predominantly assessed by health status, using pathological and clinical measures, and health-related quality of life that is usually abbreviated to ‘HRQoL’ measures (Smith et al., 1999).

However, measuring outcome is more complicated than process (American College of Emergency Physicians (ACEP), 2014). Measuring outcomes becomes harder, particularly when a service would not naturally produce positive results and, therefore, measuring the outcome is not straightforward, such as in hospice services where the outcome is the end of life of a person (Thompson and Oliver, 13 Care designed to give supportive care to people in the final phase of a terminal illness and focus on comfort and quality of life, rather than cure. Available at: http://www.medicinenet.com/script/main/art.asp?articlekey=24267 [accessed 10 Apr. 16]
2008; Fennell, 2001). Nonetheless, as previously discussed, outcome-based performance management shifts attention from outputs and quality to outcomes as the dominant measure of performance.

Furthermore, generic and disease-specific outcome measures are distinguished. ‘Generic health status measures are those that purport to be broadly applicable across a variety of health subjects..., assessing health status, or QoL that applies to many different impairments, illnesses, patients, and populations. Disease-specific measures are those designed to assess specific diagnostic group or patient populations often with the goal of measuring responsiveness or clinically important changes..., such as grip strength for arthritis patients or spirometry for those with chronic obstructive lung disease’ (Patrick and Deyo, 1989, p. S217).

Some other measures of quality include access to service measured by equity of access to health care services (Campbell et al., 2000; Aday and Andersen, 1974), patient satisfaction (Williams, 1994; Pascoe, 1983), patient safety and the prevention of harm to clients using services (Ursprung et al., 2005; The U.S. Institute of Medicine, 2001), or health system integration (Suter et al., 2009; Gröne and Garcia-Barbero, 2001) which, briefly, addresses the importance of coordination between different parts of a health system contributing to serve clients. Mpinga and Chastonay (2011) describe patient satisfaction as a measure of how clients perceive and evaluate provided services that, in turn, signals for health authorities and practitioners areas which need improvement. Meanwhile, Gill and White (2009) argue that patient satisfaction, as a quality indicator, has not been firmly located either as a measure of the process (Sitzia and Wood, 1997, p.1830) or as an outcome measure (Bauld et al., 2000, p.318).

Notwithstanding, Porter (2010) argues that, except for safety, none of the specified aspects are outcomes per se, rather they are all contributors to patient health outcomes. Instead, he broadens the goal of health care systems to create value that inherently encompasses other goals, such as quality, safety, patient-centeredness, cost containment, and integration. Porter proposes a value equation in which outcomes are the numerator and cost is the denominator. Outcomes refer to the actual results of care regarding patient’s health, while cost refers to the total costs involved in the full cycle of care for the patient’s health condition across the care continuum including medical and hospital services to home and community
services. Researchers, namely Porter (2010) and VanLare and Conway (2012) and Sutton et al. (2012), shift the focus from volume to value in performance measurement of health care systems, suggesting that health purchasers also need to consider service outcomes when appraising their contractors’ performance.

Regarding perspectives on performance, public service contracting assesses service quality differently from how health service researchers evaluate the quality. That is, the former group considers three levels of performance (outputs, quality, and outcomes – see the grey part of Figure 2.3 on page 40) distinguishing quality from outcomes, whereas for the latter group outcomes represent that part of quality relating to the impact of service on clients’ health status (Lohr, 1988).

Another controversy over the quality of health care measures is related to distinguishing between health outcomes and performance indicators. Giuffrida et al. (1999) differentiate uncontrollable from controllable variables in the health environment, in which health outcomes are adverse events indicating population health level (e.g. mortality or disability rates), and they are, to a large extent, uncontrollable by health workers. On the other hand, performance indicators should be controllable by staff, guiding them to improve the outcomes. In contrast, other researchers (e.g. Adair et al., 2006; Mant, 2001) declare that accommodating a distinction between outcome and process measures is indefinite, implying the existence of a causal relationship between service delivery and results that proceed from service provision.

Despite the distinction made between process and outcome indicators, these aspects can be classified under at least one of the steps of the structure-process-outcome model. In essence, Donabedian’s three-step framework is a prominent approach to defining and selecting performance measures (e.g. Gill and White, 2009; Derose and Petitti, 2003; Palmer, 1997), as it articulates the building blocks of health performance management throughout the continuum of care versus discrete approaches to health service provision.

In addition, the notion of patient-centred care, developed by The U.S. Institute of Medicine (2001), has been rapidly disseminating as a dimension of health service quality (Devine et al., 2013; Berwick, 2009; Nolan et al., 2004; Mead and Bower, 2000). In sum, patient-centred care emphasises that patient needs and values are the
main drivers of health system decisions and operations. The growth of patient-centred care drew attention to relevant concepts which imply that patients must be empowered to take more control over service delivery (Stewart, 2001). For example, two noticeable themes are patient participation in making decisions about health issues (Longtin et al., 2010; Sepucha et al., 2008), and self-management where patients are educated about disease and actions required to be taken by themselves during the care process (Lorig and Holman, 2003).

Again, health service performance has multiple dimensions. Lohr and Steinwachs (2002) explicate that research on health services must examine how social factors, financing systems, organisational structures and processes, health technologies, and personal behaviours affect access to health care, the quality and cost of health care, and ultimately population health and well-being. The authors argue further that health service research can be conducted at various levels such as individuals, families, organisations, institutions, communities, and populations.

The problems outlined in measuring the quality of health services is exacerbated when a CHS is subject to continuation and adherence to treatment plan often for the entire life of a patient. Measuring quality of health services provided to patients with long-term conditions (LTC) requires methods tailored to the continuity of LTC services, necessitating continuous improvement approaches.

2.3.4.3 Quality of Long-term Condition services

Chronic conditions are defined by the World Health Organization (WHO) as ongoing, long-term or recurring conditions over a period of years or even lifetime such as cardiovascular disease, diabetes, asthma that have a significant impact on people’s lives (Nolte and McKee, 2008). Particularly in New Zealand, LTC services are designed to support patients with identified medicine adherence issues to become self-managing through the provision of a pharmacist medicine management service (Central Region's Technical Advisory Services, 2008).

The WHO notifies that the quality of health care services for chronic conditions are rapidly becoming a challenging task for health authorities internationally. One reason is that chronic conditions cover conventional non-communicable and communicable diseases such as HIV/AIDS (Epping-Jordan et al., 2004). This
situation of chronic conditions, as Murray et al. (2012) report, can impact hugely on the burden of disease for nations.

Linked to contractual concerns are clinical studies investigating the quality of LTC services. These studies found similar themes across a variety of research projects (Porterfield et al., 2015; Wilson et al., 2015; Thompson and Oliver, 2008; Glasgow et al., 2005; Wagner et al., 2001; Baker et al., 2001; Glasgow et al., 1999; Wagner et al., 1996). These themes can be summarised as:

- the principles of developing patient-centred mindedness including correct assessing needs and empowering patients to live independently,
- collaboration among health professionals and organisations, and
- integration and coordination of health system components, including clinical and administrative operations.

Meanwhile, based on the studies cited above, specific themes on better performance management of health services are: (1) leadership, (2) goal-setting, (3) balanced managerial and clinical measurement, (4) appropriate incentives and (5) effective improvement strategies. Both managerial and clinical views identify the elements required in a managerial framework which are consistent with the principles of designing PMF outlined in the literature on PMM. However, structural characteristics of a health system must also be considered when specifying these elements.

In New Zealand, studies conducted on LTC services show concerns akin to international concerns about quality improvement and strengthening patient-centred approaches via better clinical management and collaboration between patients and their family, carers, and other stakeholders (Carryer et al., 2014; Ashworth and Thompson, 2011; Jacobs, 2007).

As previously indicated and respecting a call for further research on quality of LTC services, this study focuses on two areas from a wider list of CHS. First, Community Pharmacy Services (CPS) for patients with chronic illnesses which demand adherence to prescribed medicines for a substantial period of life. Second, Health of Older People (HOP) Services specifically for clients over 65 who often need ongoing care to keep well and support them to continue to live safely in the community (Ministry of Health, 2002). Both services share similarities in terms of
continuity of care over a long period of patient or client life. Nevertheless, the continuity of care is not limited to these two services as Adair et al. (2003) reports that also in mental health services patient outcome relies heavily on continuity of care, which has been neglected.

### 2.3.4.4 Managing performance of LTC services by purchasing cycles

One approach to stress the need for considering health service purchasing, particularly in LTC services as a continuous process is cyclic models.

Following the market-based reforms in the public health sector, Clark et al. (1995) proposed a purchasing cycle for palliative care (on the left side of Figure 2.9). These authors stress that an effective purchasing cycle needs to preserve service quality while reducing cost, promoting the partnership between purchaser and provider, and considering the results of needs assessment in service contracting.

Relational contracting for providing LTC services concerns researchers to the extent that both Porter et al. (2013) and Shaw et al. (2013) point out that public purchasers have a higher responsibility for the quality of provided services than simply contracting with selected providers. The term commissioning is, therefore, substituted for purchasing, thereby assigning public purchasers a proactive role including needs assessment, strategic planning, contracting, and performance monitoring and improving provided services. Despite assigning a higher responsibility for public purchasers, Shaw et al. (2013) propose an annual commissioning cycle (on the right side of Figure 2.9) that to a large extent resembles the purchasing cycle proposed by Clark et al. (1995) although without referring to this work.

Figure 2.9 presents both cycles and shows that they resemble the PDCA. A comparison between the two cycles reveals that after eighteen years there is neither much change in view about health service purchasing cycles nor is it clear whether service improvement is an independent stage in the CHS purchasing process.
Although both cycles contain similar features, the commissioning cycle is distinct because Shaw et al. (2013) contend that performance management of LTC services usually extends beyond the annual purchasing cycle. However, the authors do not elaborate further on how cycles are interrelated and how commissioners or purchasers can deal with issues transferring from one cycle to another.

Both studies notice that, in providing LTC services, the conventional split between purchaser and provider is no longer valid because most of the work relating to service design and delivery is conducted in partnership with providers. Likewise, some researchers criticise that the market-based model has potential limitations which attenuate the desire of providers to improve the quality and cost of care. For example, there is the preference of health professionals to work with longstanding partners instead of adhering to market principles (Dickinson et al., 2013), as well as inhibition of innovation and service improvement caused by overemphasising structural issues rather than service reform (Chambers et al., 2013).

To summarise, quality of health care services discussed numerous frameworks proposed to enhance the quality of health services from both managerial and clinical perspectives. Despite placing emphasis on engaging patients and other stakeholders, considering multiple dimensions of service, and employing CQI approaches to enhance service outcomes in health services management, Porter (2010) points out that a comprehensive tool integrating these issues is still lacking.
2.4 Analysis and Extracting Relevant Concepts

After identifying the main arguments in each strand of literature, this section analyses them to reflect what elements are required for managing provider performance and how it must be structured, respecting dynamics of health systems stemming from multiple stakeholders as well as environmental factors such as political, economic, and demographic factors.

The spread of the NPM triggered the purchaser-provider split and, consequently, an extensive application of contracting to purchase publicly funded services has been discussed. Subsequently, public purchasers are under pressure to manage contractors’ performance to ensure performance meets contractual requirements and, more importantly, client needs, which is a growing concern in the era of patient-centred care. To ensure the right performance, public purchasers use a variety of frameworks (e.g. outcome-based performance management systems, VfM, performance-based contracting) embracing multiple dimensions, markedly with outcomes to ensure that results are favourable.

On the other hand, over the last twenty years relationships between public purchasers and health service providers have evolved from arm’s-length contracting methods to more relational contracting where providers actively collaborate in designing services (Van Slyke, 2007; Brown et al., 2006; Van Slyke, 2002). This evolution engendered a shift from transactional control to relational approaches, to performance management of contractors, where collaboration with them is preferred. According to Porter et al. (2013), the relational approach is, specifically, important to purchasing LTC services as quality depends on continuity of care.

Performance measurement is a hallmark of public performance management, assessing financial and non-financial dimensions. Measures and indicators provide public purchasers with information to improve performance and service quality through identifying deficiencies and taking remedial actions. However, for adjusting performance to changes inherent in the external environment, using dynamic structures featuring CQI elements are recommended. The PDCA cycle has been used to organise dynamic performance measurement and management frameworks (Bititci et al., 2000; Anthony, 1988). Likewise, the notion of the PDCA is used, implicitly, though, to show the ongoing process of CHS purchasing (Shaw et al.,
2013; Clark et al., 1995). However, the ‘Act’ stage which stands for service improvement is not strongly emphasised in those studies.

While stakeholders in the public health sector pursue their own purposes, divergent interests and influences on contractors’ performance must be also considered (Porter, 2010). Hence, public purchasers need to identify and prioritise these stakeholders. The reason is that without the consent and collaboration of stakeholders for certain dimensions of performance (e.g. what constitutes quality of a service) conflict with their interests may diminish efforts. The abundance of CHS stakeholders suggests looking beyond dyadic or even triadic relations to identify stakeholders whose influence is due to other reasons than explicit resources.

Patient-centered care that emphasises that clients’ needs and wants are the top priority in public health services has become the key dimension of measuring health service quality (The U.S. Institute of Medicine, 2001). Measuring CHS quality is studied from clinical and managerial perspectives.

From the clinical standpoint, various quality indicators are specifically tailored to specifications of each service with the aim of improving service quality for patients at both process and outcome levels (e.g. Parameswaran et al., 2014; Boyd et al., 2005; Hirdes et al., 2004). The main purpose of quality indicators is an enhancement of QOL and HRQOL for clients (Parsons et al., 2012; Gladman and Bowman, 2012; Tinetti et al., 2002), implying service outcomes are critical to measuring performance.

While managerial views also emphasise the importance of clinical quality of CHS, they highlight a need to engage providers, patients, and patients’ families in goal setting (Ganju, 2006). Although MDTs (Schofield and Amodeo, 1999) are established to reconcile professionals’ opinions towards integrated service delivery, the caveat is that stakeholder engagement must extend to include health practitioners and managers in various stages of the CHS process (Khan et al., 2015; Wilson et al., 2015; Morris et al., 2015).

Both views emphasise quality is the key dimension of CHS performance, indicating how well services work for clients and patients. Managing quality requires comprehensive performance management methods to ensure services are at the expected level. Placing emphasis on pervasive engagement of stakeholders also
implies the need for performance management of health services instead of reliance on performance measurement.

As a summary, Figure 2.10 outlines arguments identified in each strand of the literature and concepts are extracted to identify the components of the PMF.

<table>
<thead>
<tr>
<th>Identified Arguments</th>
<th>Extracted Concepts</th>
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<tbody>
<tr>
<td><strong>1. New Public Management</strong></td>
<td>❑ Contractual relationship between purchaser and provider can be controlled by PMFs</td>
</tr>
<tr>
<td>❑ Contracts are used to regulate purchaser-provider relationship that requires monitoring of providers’ performance based on requirements set in the contract</td>
<td>❑ Providers are accountable for output, quality, and outcome of services as outlined in the contract</td>
</tr>
<tr>
<td>❑ Managing performance employs various monitoring and measuring tools to ascertain performance meets the expected outcomes</td>
<td>❑ Accountability tensions happen when fulfilling funder’s demands reduce resources to meet clients’ needs</td>
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<tr>
<td>❑ Accountability for results or outcomes stresses that purchaser and provider are responsible for service outcomes as it shows how well a service changes consumers’ health and life conditions</td>
<td>❑ Contextual factors and stakeholders affect providers performance and their services</td>
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<tr>
<td><strong>2. Performance Measurement and Management</strong></td>
<td>❑ Generic design principles are:</td>
</tr>
<tr>
<td>❑ Some principles are applicable to designing any performance management framework (PMF) or system</td>
<td>1. Role of stakeholders</td>
</tr>
<tr>
<td>❑ Dynamic structure is needed for a continuous monitoring of changes occurring in- and outside of the organisation</td>
<td>2. Continuous monitoring</td>
</tr>
<tr>
<td>❑ In public sector VM indicates economy, efficiency and effectiveness (3Es) of performance</td>
<td>3. Performance goals and objectives</td>
</tr>
<tr>
<td>❑ Stakeholders must be considered when managing the performance</td>
<td>4. Critical success factors (CSFs)</td>
</tr>
<tr>
<td>❑ While outcome is a significant dimension, programme evaluation is a tool to delve into outcomes of service and underlying causes of deviations</td>
<td>5. Performance indicators (PIs)</td>
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<td></td>
<td>6. PI’s are either determinant (ex ante) or result (ex post)</td>
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<td></td>
<td>7. Different purposes need different PI’s (process vs. outcome)</td>
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<td>8. Some PI’s are common to entire process and some are unique to a particular activity</td>
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<td>❑ Dynamic structure of PMFs adapts CQI methods to stress continuous performance monitoring</td>
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<td></td>
<td>❑ The PDCA lays a foundation for building dynamic PMPs</td>
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<td>❑ VIM determines whether there is a balance between cost, needs, and quality of service</td>
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<td></td>
<td>❑ Specific design principles of public performance management are:</td>
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<tr>
<td></td>
<td>1. A balance between accountability relations</td>
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<tr>
<td></td>
<td>2. Multiple stakeholder</td>
</tr>
<tr>
<td></td>
<td>3. Outcome is a KPI</td>
</tr>
<tr>
<td></td>
<td>4. Provider capacity</td>
</tr>
<tr>
<td></td>
<td>5. Performance evaluation</td>
</tr>
<tr>
<td>Identified Arguments</td>
<td>Extracted Concepts</td>
</tr>
<tr>
<td>----------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td><strong>3. Stakeholder Analysis</strong></td>
<td>✅ Network approaches are prevalent when IOR needs collaboration of multiple entities</td>
</tr>
<tr>
<td>✅ Stakeholder is an individual or a group who can affect or be affected by the organisation’s performance</td>
<td>✅ Identifying stakeholders uses several techniques. Stakeholder mapping is the one that provides a typology based on resources or other traits of stakeholders</td>
</tr>
<tr>
<td>✅ Conventional view classifies stakeholders concerning their resources and powers</td>
<td>✅ Process mapping is a method in marketing and operations management but it can be used to identify stakeholders and their relationships</td>
</tr>
<tr>
<td>✅ Network approaches contend stakeholders cooperate for their purposes, regardless of power or resources, and the position and number of relationships indicate the significance of a stakeholder</td>
<td>✅ Ranking stakeholders can be based on their interest and influence</td>
</tr>
<tr>
<td>✅ Grouping stakeholders is based on the similarity of their roles</td>
<td>✅ Incorporation of stakeholders in health service process is of paramount importance to improve performance</td>
</tr>
</tbody>
</table>

| **4. Quality of Health Care Services** | |
| ✅ Quality of care is measured at structure, process, and outcome stages | ✅ Process and outcomes of services indicate quality during and after service delivery |
| ✅ Patient-centred care is the key indicator of quality emphasising clients' needs and wants as the focal centre of performance | ✅ Patient needs and wants should lead the health system performance |
| ✅ Service outcomes reveal gradually over years | ✅ In health services, quality is a broad term which is assessed from different angles such as efficiency; effectiveness; safety; access; integrated system etc. |
| ✅ In CHS, Long-term Condition (LTC) services need adherence to treatment (care plan) over a long period that requires continuous management of provider performance beyond annual purchasing cycle | ✅ Among all measures, patient satisfaction is the major indicator of service quality |
| | ✅ LTC services are CHS for people whose health conditions rely on continuity of care |
| | ✅ Purchasing cycles have been proposed to display the continuous process of providing LTC services |

Porter (2010) points to the paucity of comprehensive performance management in health care sector. This study was also unable to find a framework for the CHS performance management in which stakeholders and multiple dimensions of performance are sufficiently included. Addressing this gap, this study aims to identify the elements required to build a PMF for the CHS performance management.
2.5 Research Aim and Questions

The research aim and questions were briefly introduced in Chapter 1 (see section 1.3). These are now discussed further in the light of concepts extracted from the literature.

Research aim

The study aims to ‘identify the required components of a framework used by public purchasers to manage the performance of CHS contractors while taking stakeholders into account.’

As discussed in this chapter, the distinction between performance measurement and performance management is blurred. Hence, in this thesis a PMF for CHS is defined as a combination of elements in a dynamic structure to specify, implement, and assess performance in each stage of the CHS purchasing process navigating purchasers through continuous improvement of services.

From the literature review, it is envisaged that a PMF needs to include stakeholders, performance dimensions, and performance indicators. Accordingly, three following research questions (RQ) were developed to identify these components.

Research Question 1

RQ1: Who are the relevant stakeholders in contracted Community Health Services (CHS) and is there a ranking in terms of interest and influence?

To incorporate different perspectives in performance management of the CHS purchasing process, the first component is stakeholders who have various roles in providers’ performance. To answer the first question, the study sets the following objectives.

- Identify relevant stakeholders
- Rank stakeholders according to their interest in and influence on the service process
- Cluster stakeholders into groups based on the similarity of their roles or interests in CHS

This question is informed by debates on stakeholder analysis, particularly, identifying stakeholders in IORs (part 3 in Figure 2.10) where multiple stakeholders impact on performance.
Research Question 2

*RQ2:* What elements or components of performance need to be included in a framework to manage the provision of CHS?

The second component is the critical success factors (CSFs) which determine key areas that need to be managed to obtain expected results. This research question draws on both PMM and quality of health care services. The extracted concepts from PMM (part 2 in Figure 2.10) help to identify an appropriate structure of and elements required in the PMF, whereas the concepts found in quality of health care services (part 4 in Figure 2.10) is used to identify performance dimensions of health services.

Meanwhile, public purchasers need to continuously measure the status of these areas to ensure that performance culminates in desired outcomes for the populations.

Research Question 3

*RQ3:* What are the required performance indicators for assessing the performance of CHS providers and their service quality?

The third component is performance indicators (PIs) to evaluate the success of activities at reaching the performance goals and pertinent CSFs. This question is also built on the concepts derived from PMM and quality of health care. While the former helps towards an appropriate definition of PIs, the latter provides insight into which aspects of quality of health care services must be included as PIs.

2.6 Conceptual Framework

Reviewing the literature revealed that performance management of CHS is a multidimensional phenomenon. However, investigating all dimensions of the CHS purchasing process would be complex and unwieldy.

In practice, the dilemma is that public purchasers are not able to directly monitor service quality during the delivery process because it is the client who experiences quality (Kamis-Gould, 1987). Instead, one avenue to ensure that quality meets client’s expectations is the deployment of CQI approaches to managing providers’ performance. The chapter discussed the PDCA as a CQI approach to dynamic performance management (Bititci et al., 2000). On the other hand, the PDCA cycle
is more often used to formulate projects on quality improvement in the health care sector (e.g. Beitsch et al., 2015; Rosati, 2009; Langley et al., 2009).

This study applies the PDCA to a broader scale than a project, as an initial platform to construct the PMF for CHS purchasing. This application differs from prior usage because CHS purchasing is an ongoing process and establishes an IORs between public purchasers and contractors. The PDCA enabled this research to identify purchasing activities in connection with the Plan-Do-Check-Act stages. Establishing a correspondence between purchasing activities and the four stages led to discovering what constitutes performance in each stage of the CHS purchasing process. Figure 2.11 depicts the proposed conceptual framework.

![Diagram](image)

Figure 2.11 The Proposed Framework Conceptualising Performance Management of the CHS Purchasing Cycle as a PDCA Cycle Working under the Influence of Stakeholders and External Factors

Figure 2.11 has three concentric circles. The outer loop shows how external factors have an impact on CHS purchasing process. The middle loop shows that existing stakeholders also influence the performance. The inner loop is the CHS purchasing cycle that, consistently with the PDCA’s stages, has four managerial areas. The investigation focuses on the middle and inner loops.

The first stage of the purchasing cycle is the Plan, in which, based on the results of needs assessment, the purchaser will determine the purchasing strategy and service specifications, while also considering stakeholders’ needs and expectations.
In the *Do* stage, the strategies and plans to purchase specified services are implemented. As explained previously, under the purchaser-provider split resulting from NPM, the contract became the main vehicle for purchasing public services from NGO providers.

Throughout the process, the contract is a precondition for expected performance that gives rise to the elements of a performance measurement framework in the *Check* phase. To monitor and measure the NGO’s performance, the purchaser needs to collect reliable data and develop meaningful performance measures to determine whether performance satisfies objectives and stakeholders’ expectations.

In the fourth stage, *Act*, the result of performance measurement guides the purchaser to improvements in strategy, or plans, and actions in the Do phase as well as the efficiency and effectiveness of the measurement framework itself.

The conceptual framework resembles Figure 1.2 that shows continuous improvement of services based on actual outcomes is crucial to implementing the NZHS/NZDS. The PMF must have, thus, a dynamic structure with respect to the need for continuous improvement of health services.

**Summary**

The chapter began by reviewing fundamental theories of IORs. Then it discussed NPM, PMM, stakeholder analysis, and quality of health care as four strands of literature addressing the research problem. An analysis of the literature led to identifying arguments from which a set of concepts were extracted. Figure 2.10 summarises the extracted concepts.

In the light of the extracted concepts, the research aim and questions were explained. While the study aims to construct a PMF for the CHS purchasing process, three research questions have been formulated to accomplish the aim. The chapter proposed a conceptual framework that conceptualises the initial assumptions about the PMF.

The next chapter describes methodology and details of the research method, data collection, data analysis, and validation of findings.
3 Research Methodology

This chapter describes the methodological choices through which the required data to accomplish the research’s aim was collected and analysed. The chapter will then explain the methodology, method, and actions taken to complete data collection, analysis, and validating the PMF.

3.1 Introduction

The previous chapter discussed the literature addressing various dimensions of performance management in the public sector where managers encounter multiple stakeholders and dynamic environment. Identifying the components needed to construct a PMF that addresses the research aim and questions requires practitioner collaboration to increase the applicability and acceptability of the results.

This chapter discusses the research methodology and method used in the thesis. It starts by introducing the constructivist and interpretivist approaches applied to investigating various views on managing the performance of CHS providers. The chapter also describes the abductive logic approach to explain the role of theory in the interpretation of data. It will then introduce the qualitative methodology and method, including details on action research and the cyclical model of action research. The chapter also explains the reasons for using action research and techniques which were used to analyse the data. The unit and level of analysis and the criteria considered to validate the results are also discussed.

The spiral model of this action research is then presented which consists of three cycles showing that, consistent with the definition of action research, this research progressed through a sequence of steps where understandings gradually increased and improved, and decisions about the next action were made based on those learnings. Each cycle represents actions undertaken to collect, analyse, and verify the data. In addition to the fieldwork, documentary analysis and attending professional health service forums were used to complement the data.

3.2 Constructivism and Interpretivism

Ontology deals with the nature of social entities asking whether they are objective realities or constructions made by social actors based on their perceptions and actions (Bryman and Bell, 2015). Objectivism and constructionism are
ontological considerations. The constructionism position believes that social constructs are built up from the perceptions and actions of social actors (Burell and Morgan, 1979). Bryman and Bell (2015) explain that social phenomena are not only produced through social interaction but that they are in a constant state of revision. Constructionism is the choice of ontology by which this research assumes that performance does not exist independently of the social actors; it is given meaning by the interaction of social actors.

Epistemology discusses whether a social entity can be studied with the same principles as natural science or requires a different approach to research for discovering the subject matter of the social sciences. Interpretivism is a term given to a contrasting epistemology to positivism. According to Bryman and Bell (2015), interpretivism is predicated upon the view that a strategy is required that respects the differences between people and the objects of the natural sciences. Therefore, the social researcher is required to grasp the subjective meaning attributed by social actors who create the reality. Interpretivism is the epistemological choice by which this research assumed that purchasers and providers have different perceptions of performance. To ascertain their perceptions, naturalistic methods including interviews, observations and analysing archival documents are required.

The knowledge about performance and dimensions attributed to it in different settings is reported in the extant literature which this study uses to understand evidence found in the field and reciprocally provide new insights into those theories. The next section explains the role of theory in research.

3.3 Abductive Reasoning

Dubois and Gadde (2002) describe abductive reasoning as an argument for a stronger reliance on theory than is suggested by true induction, emphasising the development or refinement of existing theories instead of theory generation. However, abductive reasoning is closer to an inductive than a deductive approach, implying a continuous interplay between theory and empirical observation. The authors explain further that abductive reasoning is a process, in which a conceptual framework, empirical fieldwork, and case analysis evolve at the same time, and it is particularly useful for theory development purposes.
As the intended PMF is mutually built upon the research data and the concepts extracted from the literature, abductive reasoning specifies the role of theories in analysing the data. Following the abductive logic approach, the conceptual framework (Figure 2.11) in Chapter 2 is built on existing theories, and will evolve as the fieldwork data is further analysed. Figure 3.1 depicts the abductive model of this study.

*Figure 3.1 The Abductive Model of the Study*

This figure shows while the literature provides an initial generic model with general concepts around performance, the fieldwork (i.e. interviews, document analysis, ALTC 2014 conference, and NGO open day) provides the interpretation of the general model specific to CHS. Interviews identified the themes of the CHS performance management and complementary sources were used to confirm or clarify the interview themes (phase 1). This was a continuing process of refining the evolving conceptual framework and themes generated by interviews. Boxes numbered 3 to 7 refer to the Figures in the analysis in Chapter 4 that encapsulate the research from each source of data. Based on the concepts identified in each complementary source, the conceptualisation of the interview themes is finalised (phase 2) leading towards the completion of the PMF. Thus, it follows the abductive
logic process described above in which the conceptual framework and empirical fieldwork evolve at the same time.

3.4 Qualitative Research Methodology

Guba and Lincoln (1994) explain enquiry paradigms in qualitative research as a set of beliefs to view the context that includes the social actors, meanings attributed to activities and consequences, and the relationships between the context and its parts. Similarly, Creswell (2009) describes qualitative methods as inquiries undertaken in a natural setting featuring purposeful sampling, gathering open-ended data through interviews and analysis of documents, and personal interpretation of the findings.

Creswell (2009) further explains that in qualitative research one builds the patterns, categories, and themes from the bottom up, by organising the data into increasingly more abstract units of information. He adds that this inductive process illustrates working back and forth between the themes and the data until the researchers have established a comprehensive set of themes. He proposes that inductive data analysis also involves collaborating with the participants interactively, so that participants have a chance to shape the themes or abstractions that emerge from the process.

In summary, the research follows a qualitative methodology utilising the constructivist and interpretivist positions adopted in this research to understand how contractual parties define performance and identify stakeholders.

3.5 Research Method and Design

3.5.1 Action Research

Chein et al. (1948) argue that action research is driven by three broad classes of interacting motives. Curiosity, the desire to increase knowledge of the field or comprehend a complex situation; practicality, the usefulness of the research findings to make a difference; and intrinsic orderliness, abstracting the masses of accumulated data to a comprehensible order. To implement this method, Jönsson and Lukka (2006) suggest that an action researcher needs to cross the border between etic (outsider) and emic (insider) perspectives and become an ‘insider’ who is seen as a competent and trustworthy member of the organisation.
Action research was selected to conduct this study which required interaction with practitioners in the real-time flow of the process in the field. Action research was made possible through an internship opportunity. The internship provided an insider position to investigate various aspects of the research problem and constantly check the interpretations with experts in the field to increase the validity of the findings.

Jönsson and Lukka (2006) argue that action researchers use a combination of tools to collect data in the field while they immerse themselves in the context of research. Accordingly, multiple sources of data including group discussions, interviews, archival documents, and professional health service forums were employed to enhance the validity of qualitative findings. The underlying reason for using these sources was to obtain a deep understanding of the CHS process and the status quo of managerial mechanisms and practices exercised by DHBs for managing NGO’s performance and their service quality.

Lewin (1946), a pioneer of action research, argued and recommended that social researchers have to include practitioners from the real social world in all phases of enquiry for successful implementation of change. In the field of health services research, Bowling (2009) asserts that although action research uses the methods of social science, it does not treat people as subjects of study but attempts to achieve improvements via auditing processes and critically analysing events. Action research is, however, criticised for its lack of repeatability and thus rigour (Eden and Huxham, 1996). To increase the validity of results, the study employed a number of tactics that Miles et al. (2013) suggest. These tactics are the usage of multiple sources of data, participant checking of transcripts and process maps, verifying different versions of the PMF, and validating the conclusions with respondents who had not participated in the interviews.

3.5.2 The Cyclic Model of Action Research

Action research is known for being a nonlinear design in which data collection, analysis, and interpretation of findings progress simultaneously and through a number of iterations. Kurt Lewin initially portrayed action research as a spiral of cycles developed over time (Altrichter et al., 2002). Later, action researchers (e.g. Kemmis and McTaggart, 1988; Susman and Evered, 1978) develop the Lewin’s model and show that each cycle comprises planning, action, evaluation, and
reflection by which learning happens and, through time, the results are continually improved. For example, van der Lem and Wongpang (2003) redraw Lewin’s cyclic model to show how as time progresses, revising a plan takes place in the next cycle justifying a spiral format rather than a closed loop.

It will be explained later that in this action research three consecutive cycles gradually formed as additional data constantly expanded and enhanced understanding of the phenomenon under study. This cyclical progression enabled the study to continually develop and improve the PMF’s structure and components throughout the study.

3.5.3 Reasons for Using Action Research

In qualitative research, there are a number of explorative research methods (e.g. case studies) which, as Ahrens and Chapman (2006) affirm, should be used as long as they fit the context of the study. In this particular setting, action research was considered to be the most suitable method for four reasons.

1. Action research is commonly used in health services research where a collaborative research design is used to explore issues of health delivery with the purpose of improving the patient experience (Lingard et al., 2008; Meyer, 2000). Senior managers at DHB1 supported this research and wanted to be involved in the process.

2. Action research is an appropriate method to engage with experts and grasp their perspectives about activities and organisations (Jönsson and Lukka, 2006; Kaplan, 1998). The PMF is intended to provide practical interventions in the CHS performance management and needs greater involvement of the researcher in the field.

3. Using action research responds to a call for conducting qualitative studies to enhance the knowledge about the experiences and views of social actors in health service settings (Pope and Mays, 1995). As shown in Figure 3.2, being involved in the field of CHS over three years resulted in a deep understanding of different activities underlying planning, delivery, and improvement of these services.

4. The proposed conceptual framework in Chapter 2 is analogous to learning loops (Argyris, 1991), being the cognitive rules or reasoning people use to design and implement their actions. This is because the PDCA cycle
portrays learning from experience which is the core idea of action research (Argyris, 1970). Hence, examining the conceptual framework based on the PDCA cycle fits with action research methods which essentially address learning systems (Roberts et al., 2010).

3.5.4 Data Analysis

Strauss and Corbin (1990, p.13) explain that 'analysis is the interplay between researchers and data.' In qualitative methods, data analysis is an ongoing process that continues along the study, as opposed to being a separate step (Miles et al., 2013). Similarly, data analysis was an ongoing process undertaken throughout the research. The transcripts were coded to extract themes addressing the components required to build the PMF. The data obtained from group discussions, process maps, archival documents, and notes taken during the professional health service forums were analysed to examine and complete the themes which emerged from interviews.

Data analysis involved thematic analysis (Saldana, 2012) and cross-comparison of themes emerging from multiple sources of data implying the notion of cross-case analysis (Miles and Huberman, 1994) that reveals the extent to which data obtained from multiple sources are similar.

1- Thematic analysis. Interviews were coded by NVivo to extract the themes on performance. The data generated from attending the forums was analysed manually to extract themes on health services performance.

2- Word-frequency analysis. Archival documents on NZ public health were classified into three groups of General Public Health, CPS, and HCSS (e.g. NZ and specific strategies, policies, contracts and standards). NVivo word-frequency query was used to analyse these documents to determine the most frequently noted ideas about the key performance dimensions of the health system.

3- Cross-comparison. Comparing the themes which emerged from the interviews, documentary analysis, and professional health service forums increased the understanding of the subject of the study and supported the articulation of components required in the PMF.
In Chapter 4, the findings will be organised in the form of constructs, each containing key themes, individual themes, and relevant concepts illustrating an incremental abstraction of qualitative data (Saldana, 2012; Chein et al., 1948).

3.5.5 Unit and level of analysis

Miles and Huberman (1994) contend that qualitative researchers need to define the case or unit of analysis for the phenomenon that is being studied. The unit of analysis can be individuals, groups, or social interactions that indicate who or what is being studied. For the purpose of this research, the unit of analysis is the dyadic relationship between purchaser and provider established by the contract.

The level of analysis is another criterion used to indicate the scale of the phenomenon under study. The DHB’s Annual Plan aligns the national, regional, and local health priorities for each financial year ending 30th June. The Annual Plan defines the actions and budget required to deliver on a DHB’s objectives relating to its vision and strategic goals for improving the health of its community. It also indicates how DHBs will measure their performance using financial and non-financial performance indicators. While many other projects run in parallel to annual plans, this research concentrates only on how DHBs manage the performance of NGOs according to the Annual Plan and contract.

3.5.6 Validating the Results of Qualitative Research

Miles et al. (2013) describe the following five criteria to increase the validity of final results generated in qualitative research. This research adhered to these criteria when necessary to ensure the trustworthiness of conclusions.

- **Credibility**, or internal validity, is described as the authenticity of understandings of the studied subject. Simply, the credibility of a research activity asks whether its findings make sense. One tactic to elevate credibility is to triangulate multiple sources of data (here fieldwork, documentary analysis, and professional health services forums), participants’ perspectives (here DHB and NGO), and theories. Another tactic helping to refine the findings lies in moving back and forth between the field, collected data and theory, which creates an iterative process to improve the understanding of phenomena (Creswell, 2009; Jönsson and Lukka, 2006).
Transferability, or external validity, refers to the ability of findings, generated in a study, to generalise to other settings. Lincoln and Guba (1985) argue that there is no generalisation in qualitative inquiries. Whereas Maxwell (2012) distinguishes between internal and external generalisation, from which he explicates that internal generalisability implies the fitness of a conclusion within the setting studied while external generalisability refers to the dissemination of the conclusion beyond that setting. Particularly in management accounting research, Lukka and Kasanen (1995) argue that case observations can be generalised as long as prior knowledge and rich description of the studied phenomenon are considered.

Dependability, or reliability of findings, relates to the extent to which research steps have been reasonably stable over time and across researched sites.

Confirmability, or objectivity, relates to reasonable freedom from unidentified researcher biases. In health service research, a similar concern is called reflexivity (Pope and Mays, 2006) that emphasises minimising the effect of prior personal assumptions on observing the natural process of the study.

Application, Miles et al. (2013) discuss the importance of benefits (or harms) that studies such as action research, involving communities, offer to their participants and consumers.

The following section explains how this research accomplished its aim to construct the intended PMF by collecting and analysing the relevant data through an iterative process which is reported by a spiral model.

3.6 The Study’s Action Research Cycles

Figure 3.2 exhibits the spiral of this action research that consists of three cycles through which the construction of the PMF was completed. Each cycle is divided into planning, action, evaluation, and reflection periods. Each cycle represents a year of research and contains a set of consecutive steps. The steps are composed of some research activities undertaken almost concurrently. Despite reporting the research in separate steps around the three cycles, data collection and analysis were performed together and continued throughout the study.
In Cycles 1 and 2, research participants were involved in group discussions and interviews for identifying stakeholders and components required in the PMF. This section expands on the steps carried out to collect and analyse the data resulting in the identification of key themes on providers’ performance management. It also explains the actions undertaken to increase the validity of findings.
3.6.1 **Cycle-1: Steps 1-12; Planning the investigation and Reflective Analysis**

Cycle-1 commenced with planning to investigate the research problem followed by a round of interviews and reflection on the data.

1. **Identifying the gap in performance management of CHS contractors in DHB1.**

In the first visit at the planning and funding department of DHB1, an audit manager (the senior manager at DHB1 referred to in Chapter 1) pointed to their problems in managing the performance of CHS contractors regarding quality and outcomes of services. Hence, Cycle-1 commenced identifying this gap and scoping performance management problems in collaboration with potential research participants. This step, in conjunction with a preliminary review of PMM literature, concentrated on formulating the research problem.

2. **Reviewing literature and archival documents for developing a conceptual framework based on the PDCA.**

A literature review focusing on subjects related to the purchaser-provider split and issues of performance management in health services provided insight into various aspects of the research problem. Also, reviewing NZ public health documents, namely NZHDS and Annual Plans, revealed that health authorities are concerned about the diffusion of continuous improvement approaches to health service management.

As explained in Chapter 2, the PDCA has been historically regarded as a platform for designing dynamic performance management frameworks. Therefore, a conceptual framework conceptualised the initial thoughts on components and structure of the intended PMF following the PDCA’s stages. The structure of the conceptual framework is consistent with the CHS annual purchasing cycle, and it shows how several stakeholders affect this cycle. This framework was used to guide data collection, data analysis, and developing the PMF, which was continuously modified as the study progressed.

3. **Internship in the planning and funding department of DHB1.**

An internship was then arranged to gain access to informants in DHB1 and contact other DHBs. As Jönsson (1999) suggests, to do action research it is easier to be an insider. The internship facilitated being an insider to interact with
managers in order to collect data on the CHS purchasing process, observe how different parties define performance and identify existing stakeholders’ perspectives on performance and its implications.

4. **Group discussion 1 (GD1) at DHB1: introducing the research’s aim and the conceptual framework.**

In this session, the aim of the research to create a PMF was introduced to a group of potential participants in DHB1. Those were managers involved in various roles in service purchasing processes including auditing, contracting, and service delivery management. It was also explained that the PDCA had been chosen to propose a conceptual framework as the initial platform for structuring the intended PMF. The managers were also asked to write some examples of their activities in managing purchasing processes in each stage of the PDCA (the questionnaire is provided in Appendix 1). The purpose of this activity was to ascertain how underlying activities of the CHS purchasing process can be classified under the Plan, Do, Check, and Act stages.

The managers collaborated in scoping the problem in performance management of contractors and identifying the areas of CHS for studying.

Evidence from GD1 was reviewed and analysed by process mapping tools. Mapping the CHS process assisted identification of who are involved as stakeholders.

5. **Creating a preliminary map of the CHS purchasing process.**

Analysing the examples provided by the managers in GD1 and further review of the literature along with archival documents led to creating a preliminary map of the CHS process. This map helped, firstly, to show how the managers attribute the underlying activities to each stage of the PDCA and, secondly, to identify who are the stakeholders of the CHS process.

6. **GD2 at DHB1: Verifying the preliminary map. Selection of participants.**

The same managers who attended GD1 also verified the preliminary map in GD2. They discussed the map and suggested changes to linkages between the identified stakeholders. Their comments were reviewed and compared with the New Zealand health and disability structure (Figure 1.1) resulting in a revision of the preliminary map.
Another research activity in GD2 was the selection of participants. As a qualitative study, participants were selected purposefully (Creswell, 2009) considering their roles in the CHS purchasing process. Respecting the conventional model of a purchaser-provider split, interviewees were from the purchaser (DHB) and provider (NGO) organisations. The participants were a group of managers in planning and funding of DHB1 most of whom attended GD1 and GD2, namely:

1. A contract manager who dealt with the administrative side of the contract.
2. Service managers (HOP, CPS, and Dental Care services) who manage the relationship with providers and their performance.
3. A finance manager who through informal discussions assisted in initiating the CPS process map.

Interviewing the managers in DHB1 furnished an opportunity to contact managers in DHB2 and DHB3 as well as some NGOs. Table 3.1 provides an overview of the organisations participating in this study.

Table 3.1 An Overview of the Organisations that Participated in this Study

<table>
<thead>
<tr>
<th>District Health Boards</th>
<th>Annual Funding</th>
<th>Population Served</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ DHB1</td>
<td>+ $1000 million in 2015/16</td>
<td>- 500,000 people</td>
</tr>
<tr>
<td>▪ DHB2</td>
<td>+ $1000 million in 2015/16</td>
<td>+ 500,000 people</td>
</tr>
<tr>
<td>▪ DHB3</td>
<td>+ $1000 million in 2015/16</td>
<td>+ 500,000 people</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Non Governmental Organisations</th>
<th>For-profit (FP) OR Non-profit (NP) / Type of Ownership</th>
<th>Number of Staff</th>
</tr>
</thead>
<tbody>
<tr>
<td>HOP</td>
<td>▪ NP / charitable organisation</td>
<td>+ 20</td>
</tr>
<tr>
<td></td>
<td>▪ NP / private</td>
<td>+ 20</td>
</tr>
<tr>
<td></td>
<td>▪ NP / charitable organisation</td>
<td>+ 20</td>
</tr>
<tr>
<td></td>
<td>▪ FP / private</td>
<td>+ 20</td>
</tr>
<tr>
<td>CPS</td>
<td>▪ FP / private</td>
<td>+ 10 (in store)</td>
</tr>
<tr>
<td></td>
<td>▪ FP / branch of a pharmacy chain</td>
<td>- 10 (in store)</td>
</tr>
<tr>
<td></td>
<td>▪ NP / a DHB pharmacy</td>
<td>+ 10 (in store)</td>
</tr>
<tr>
<td></td>
<td>▪ FP / branch of a pharmacy chain</td>
<td>- 10 (in store)</td>
</tr>
<tr>
<td></td>
<td>▪ FP / private</td>
<td>- 10 (in store)</td>
</tr>
</tbody>
</table>

Based on the feedback from GD2 the preliminary CHS purchasing process map was revised. The revised version was checked with a contract manager who was in both GD 1 and 2 and the linkages between stakeholders were further modified. The revised version is presented in Chapter 4 and illustrates the starting point of analysing the CHS purchasing process and its stakeholders.

The contract manager was also asked to complete a checklist assessing the current mechanism of performance management (the checklist is provided in Appendix 2). This data was used to ascertain what mechanisms or methods are currently used to manage contractors’ performance.

8. Interviews in DHB1: one contract manager and three service managers.

Collecting more archival documents.

The interviews followed the specific interview guides, each of which was tailored to the research questions and the role of the participants’ organisation in the CHS purchasing process. Interviews were semi-structured allowing the participants to express their opinions and elaborate on their answers. To preserve consistency across participants’ answers, the same guide was used for interviewees in DHBs (only service managers) and NGOs. Interviews with the contract manager and public health physician were different because they covered other problems of performance.

Most interviews were managed so as to last no longer than one hour. However, in a few cases, interviewees were willing to elaborate on given answers, extending the interview beyond two hours which provided rich descriptions of problems in measuring performance. The interviews were recorded, transcribed, and returned to interviewees for correction or elaboration.

In order to minimise any bias arising from misinterpretations by the interviewer, interviewees were asked to confirm both the accuracy of transcriptions and the inferences from their responses. Where necessary, participants’ feedback was then used to correct the transcripts of the interviews.
In accordance with the ethical guidelines, participants were requested to declare their consents to participate before starting the interview. During the action phase of Cycle-1 (Steps 7-9), individual interviews in DHB1 and three home care providers were conducted.

Interviews with managers in DHB1 were divided into two parts. First, an interview with a contract manager revealed that contract managers controlling the contracting process do not necessarily include any performance management function. This interview also uncovered the dimensions of provider performance which are important to contract managers. The interview questions for this participant can be found in Appendix 3. Basically, contract managers are concerned with accountability mechanisms established by the MOH.

The second part of interviews in DHB1 consisted of interviewing service managers\(^{14}\) for HOP and CPS. The interview questions for this group of participants are provided in Appendix 4. In DHB1, another interviewee was a finance manager who despite having an indirect role in service purchasing helped to complete the funding and the accountability stream of the CPS process map (Figure 4.5).

While interviews revealed some aspects of managing contractors’ performance, gathering additional archival documents provided more data on performance dimensions. Moreover, the HOP manager in DHB1 facilitated contacting four home care providers, three of which agreed to participate.

9. Interviews in NGOs: three home care providers.

In HOP, managers dealing with delivery of home care services to older clients (aged 65 and over) were invited to participate. Interviews followed a guide that was tailored to explore NGOs’ responses to fairly similar questions as DHBs from a provider perspective. The interview questions for the NGOs are provided in Appendix 5. Three home care providers were interviewed who answered the questions from HOP perspectives. These interviews revealed how providers define and measure performance regarding their contract with DHB.

\(^{14}\) Service managers, also known as portfolio managers, manage the CHS purchasing process and DHB’s relationship with NGOs regarding the contract and performance
10. Interview in DHB2: 1 CPS manager, emphasising the quality of LTC services.

Interviewing the CPS manager in DHB1 led to arranging an interview with a CPS manager in DHB2. The interviewee provided further details about problems of managing the performance of pharmacies and, particularly, measuring the quality of LTC services provided to manage chronic illnesses.

The emphasis on LTC services by both CPS managers drew the study’s attention to the importance of quality for DHBs in serving patients who are suffering from chronic conditions.


Reflection and interpretation of the interviews revealed how performance is defined in DHBs and by HOP contractors. It also helped to identify what mechanisms are used to manage performance by both parties.

Moreover, an initial analysis of responses initiated mapping out HOP and CPS processes to identify service stakeholders in both areas. The visualisation, as Bernard and Ryan (2010) contend, provided a clear illustration of stakeholders. Particularly, the CPS process map was used in interviews during Cycle-2 to show interviewees the stakeholders and relationships between them. The maps triggered the interviewees’ system thinking by displaying an interface between service process and stakeholders that assisted identifying other stakeholders.

12. Revisions of the study’s scope: Focusing on quality of service providers.

Focusing on LTC services in CPS.

At the end of Cycle-1, the initial broad scope of the study was narrowed down. The quality of service appeared to be the most important dimension of providers’ performance for service managers. Hence, the first revision was focusing on quality of providers services and articulating the PMF’s elements based on that.

Second, as pointed out in Step 10, interviewing two CPS managers directed the research to focus more on LTC services in which quality was found to be of crucial importance compared to other sub-areas of CPS, for example, daily dispensing medicine to non-LTC clients.
3.6.2 Cycle-2: Steps 13-17: Analysing Interviews and Complementary Data

In this cycle the interviews were completed and analysed to generate themes. Archival documents were analysed, and the results along with the generated themes were summarised as PMF version 1. The cycle ended by attending the Australasian Long-term Conditions (ALTC) conference 2014.

13. Interviews in: NGOs (five pharmacies); DHB2 (one public health physician); DHB3 (one CPS manager). Development of the HOP and CPS process maps.

Cycle-2 started by interviewing five pharmacies and refinement of the initial findings of managing performance in LTC services. The CPS manager in DHB1 made initial contact with a few pharmacies. However, since some pharmacies who initially agreed to participate withdrew their consents, cold calling was instead used to find participants.

In CPS, participants were mainly pharmacists who had the appropriate knowledge to elaborate on dimensions of performance regarding both their contract with DHBs and technical issues of LTC services. In most interviews, pharmacists answered the questions and then reviewed the CPS process map. When necessary, they modified linkages or added missing stakeholders that helped to develop the map. For example, one pharmacist mentioned that intersectoral action plans which are implemented by other government agencies were also among CHS stakeholders because they have an impact on health services performance. Meanwhile, some pharmacies emphasised the lack of key performance indicators (KPIs) for measuring the quality of LTC services. As a result, the development of both process maps in collaboration with the participants was almost finished.

In other DHBs, two interviews were arranged. Interviewees were a public health physician\(^\text{15}\) in DHB2 and a CPS manager in DHB3. The inclusion of the former was to ascertain measures of quality for LTC services from a physician standpoint. In the latter interview, the CPS manager elaborated on the managerial actions required to improve the quality of LTC services. Both

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participants stressed the need for managing the quality of LTC services by methods other than conventional accountability mechanisms.

Saldana (2012) explicates that analysing qualitative data is a constant abstraction of findings to more high-level and general constructs. After transcription, interviews were coded by NVivo to generate themes. Each interview question was labelled by a code that was abductively defined based on the purpose in the light of concepts found during the literature review. The generated themes were sorted to identify the most frequent subjects representing key themes.

Archival documents reflecting the health officials’ concerns about service performance were used as the first source of complementary data to compare and refine the themes. The documents were categorised into three groups (Appendix 6 lists the documents).

- **General Health** documents which cover, for example, health strategy, policy, operational guidelines, and standards outlining the principal aims of the services. In sum, this collection of documents sets out the overall direction and expectations for the entire health system regardless of the service type.

- **HCSS** documents that assisted in discovering other aspects of performance which were not fully discussed during interviews. This group of documents included, for instance, Health of Older People Strategy, Sector Standards (NZS 8158:2012), published reports, and contracts.

- **CPS** documents consist of, for example, strategies related to pharmacy services, Sector Standards (NZS 8134.7:2010), Quality Audit Reports, Performance Monitoring Reports, contracts, and other publicly available documents published on the new service model for community pharmacy that highlights the management of LTC services.

CPS has undergone significant changes since the introduction of the New Service Model for Community Pharmacy in 2012.¹⁶ The new model emphasises

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a patient-centred model of care via engaging pharmacists ‘to better tailor services to patients, particularly to patients with multiple co-morbidities and on many medications’ (DHB Shared Services, 2012).

Documentary analysis was conducted to identify key performance dimensions outlined in archival documents. Weber (1990) explains the techniques used in content analysis for the purpose of reducing textual material to more relevant and manageable pieces of data. Among these techniques, the ‘word-frequency list’ was used to identify the most frequent words. The analysis was implemented based on keywords drawn from the literature on PMM and quality of health care services which were also used to code interview transcripts.

In NVivo, the ‘Word Frequency’ function was run on each of the document groups. The word frequency counts the number of times each word appeared in all selected texts, producing a list of words. For each group, the list was condensed by grouping synonyms. The lists were ranked to identify most frequently occurring phrases. This analysis involved more than counting the repetition of specific words. Rather, by considering the context of CHS settings and relationships between purchaser and provider, the objective was to interpret the key dimensions of service performance.

Second, further analysis of the process maps led to organising identified stakeholders in HOP and CPS areas into a combined list representing all CHS stakeholders.


The results of analysis leading up to this step were organised as the first version of the PMF (PMF-01). This version encompassed the themes that were grouped into four main categories and a provisional list of stakeholders. However, the categories constantly changed as the study progressed and further details of CHS performance were identified. The initial PMF focused mainly on Do and Check stages of the conceptual framework because contracting (Do) and measuring contractors’ performance (Check) were assumed to be the span of the CHS performance management at DHB level.
This version of PMF was presented and discussed at the AFAANZ Conference 2013-SIG 8\(^\text{17}\). The feedback provided by attendees helped to define CSFs and PIs in PMF version 2. The versions of the PMF (from PMF-01 to PMF-04) are provided in Appendix 16.

16. ALTC Conference 2014: Collecting more data on managing LTC services.
Attending the ALTC conference 2014\(^\text{18}\) was the second source of complementary data. The details of the conference and attended session are provided in Appendix 9. The major sources of data were the conference handbook and oral evidence gained by listening to conference presentations.

The oral evidence was captured by taking notes. The notes were then typed in Word and read several times to extract the themes. As a result, the emerged themes outlined some factors critical to the quality of LTC services. These themes were summarised by assigning relevant concepts which were extracted from the literature.

This conference was also an opportunity to contact future respondents who later verified the next versions of the PMF in Cycle-3 and took part in scoring stakeholders.

17. PMF version 2 (PMF-02): Retaining the focus on the Do and Check stages.
Restructuring PMF-01 to two levels. Defining CSFs and PIs. The combined list of stakeholders. 1 interview in DHB1 (reviewing PMF-02)
While the second version retained its focus on the Do and Check stages, it was restructured into two levels. Level one portrayed the overall cyclical format of the PMF, preserving the initial structure of the conceptual framework. Level two consisted of a preliminary set of CSFs and PIs along with a list of stakeholders. This version was presented at the NZMAC 2014\(^\text{19}\), ARA 2014\(^\text{20}\), and PMAA 2015\(^\text{21}\) conferences resulting in identifying new elements such as rewarding high-performers.

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\(^\text{17}\) Accounting and Finance Association of Australia and New Zealand. Management Accounting Special Interest Group (SIG8)
\(^\text{18}\) Australasian Long-term Conditions
\(^\text{19}\) New Zealand Management Accounting
\(^\text{20}\) Auckland Regional Accounting
\(^\text{21}\) Performance Measurement Association of Australasia
In this step, another research activity was completion of the stakeholders’ list. This list combined the stakeholders identified by the HOP and CPS process maps and other entities which emerged from analysis of the archival documents and conversations in the ALTC conference. The list was later used for scoring stakeholders. The last activity was an interview with a General Practitioner (GP) who reviewed the structure of PMF-02.

3.6.3 Cycle-3: Steps 18-23; Refinement and Validation of the PMF

The final cycle entailed continuous modification of the PMF through constant returning to the field and verifying the second and third versions of the PMF with experts. Also, the identified stakeholders were scored and ranked. The results were prepared as PMF version 4 which was presented to a group of managers for validation.


The list of stakeholders was aligned with the four stages of the conceptual framework to prepare a stakeholder scoring sheet which is available in Appendix 10. The scoring sheet was completed separately by two respondent types in DHB3 – namely a Transformation Manager (DHB3) and ARHOP22 Managers (DHB3) who attended GD3 – to rank the relative importance of stakeholders based on their interest and influence in each stage of the conceptual framework (Figure 4.13).

In addition to scoring stakeholders, the Transformation Manager verified the second version of the PMF when using the PDCA to structure the PMF was questioned. A similar doubt had been raised previously by the GP in DHB1, and a service development manager in DHB2. These queries led to reflection on the four-stage structure, resulting in a new format presented in version 3.

22 Adult Rehabilitation and Health of Older People. The team was comprised of three managers. Since they needed to consult about scores, they completed the scoring sheet and returned it a week later.
PMF version 3 (PMF-03): Re-focusing on all four stages of the PDCA. Restructuring the PDCA into a three-stage cycle by embedding Check into Plan-Do-Act and creating PDI (Planning-Delivery-Improvement). Two interviews in DHB2 (verifying the PDI). An interview in DHB2 (verifying the PDI and scoring stakeholders).

The PMF version 3 was a considerable revision of the previous version. This step of Cycle-3 consisted of four research activities.

First, discussion with those who verified the second version of the PMF led to the recognition of interdependencies between planning, delivering, measuring, and improving services. Hence, the prior focus on the Do and Check stages was widened to include the Plan and Act stages in the PMF as well.

Second, the PDCA in its original format was found to be relatively incompatible with the nature of the CHS purchasing process. Reflection on comments about the incompatibility of the PDCA’s format led to embedding the measurement activities, which originally sat in the Check stage, into the Plan, Do, and Act stages. Hence, the third version of the PMF consists of Planning, Delivery, and Improvement (PDI) stages.

Third, to verify the new structure, the service development manager and one innovation manager (both in DHB2) were asked to review the PDI and both confirmed its relevance to the CHS purchasing process.

Fourth, an interview was lined up with a mental health services manager in DHB2 who scored the stakeholders and reviewed the PDI cycle. The comparison of three sets of responses (transformation manager, ARHOP team, mental health services) showed that scoring stakeholders’ interest and influence depended on the service area and the respondent’s perspective.

NGO open day: Asking 10 NGOs about their key quality measures of process and outcome. Conceptualising the results obtained from multiple sources.

An NGO open day was the third source of complementary data. This forum was an opportunity to specifically enhance the understanding of appropriate performance indicators. Twenty-two NGOs providing different types of CHS presented their organisations and services. Ten NGOs, without regard to their services, were contacted. From each organisation, one respondent verbally
explained their key quality measures of process and outcome. The questions asked in this forum are provided in Appendix 11.

The answers were written, organised and read several times to understand how NGOs, providing services other than HOP and CPS, measure quality of process and outcomes. A comparison of the answers led to identifying a set of themes representing the measures of process and outcomes. These themes were summarised by relevant concepts which were extracted from the literature.

Another research activity was the completion of the final list of concepts which were refined by constant comparison with evidence from multiple data sources.

21. The PMF version 4 (PMF-04): Refining CSFs and PIs. Ranking completed, stakeholders were grouped. Inserting a focus and a performance goal in each stage of the PDI. Identifying intermediate processes in the PMF.

The PMF version 4 was built on revisions made to its previous version. This step includes four research activities.

First, review and comparison of the findings from multiple sources and reflection on verifiers’ feedback led to refining the CSFs and PIs.

Second, a ranking of the stakeholders based on their average scores was completed. They were then grouped according to the stakeholder groups suggested in the literature. The purpose of grouping was to simplify providing stakeholders with performance information via clustering similar stakeholders into a manageable number of groups. However, since each stakeholder has a unique role in different parts of the service provision process, grouping conceals the dynamic ranking of stakeholders.

Third, the progression of the study also revealed that two more components are required to complete the PMF. Hence, the second research question which initially addressed the ‘elements of performance’ was divided into three questions to separately address three components namely CSFs, as was originally intended, and two new components: a focus and a performance goal which were inserted into each stage of the PDI.

The last revision was made by identifying intermediate processes and separating them from the PDI. The reason was that these processes link performance between the stages, as opposed to contributing to performance per se.
Besides developing the PMF version 4, another research activity in this step was the preparation of a generic map of the CHS purchasing and accountability processes.

22. Validation of the PMF: in GD4, non-participating managers from other DHBs validated the PMF version 4 (PMF-04).

In GD4, the fourth version of the PMF was presented to a group of planning and funding managers from other DHBs, who had not participated in any earlier steps of the study. The reason for presenting and discussing the PMF with non-participant respondents was to verify the external validity or, as Miles et al. (2013) suggest, to evaluate how far the results can be generalised.

Five managers validated the PMF by completing a questionnaire which can be found in Appendix 12. Feedback included approvals, criticism, and suggestions to improve the PMF’s components. The responses were reviewed several times and compared with the concepts extracted from the literature, to enhance the formulation of the PIs. Their comments are referred to as ‘one manager (V1-5.GD4)’ in Chapter 5 where the formulation of the CSFs and PIs are discussed.

The validators confirmed the relevance of the PMF to the CHS purchasing process. Consistent with Maxwell (2012), this confirmation increases the possibility of using the PMF for managing contractors’ performance in the public health sector where governmental agencies purchase CHS from NGOs.

Although transferability (generalising) of findings from qualitative research to other settings might be problematic, the study attempted to increase the transferability through validation of the PMF by experts who had not participated in the previous steps. In addition to the final validation of the PMF in GD4, four other criteria to increase the validity of the PMF included:

1. Participant verification of transcripts and interpretations;
2. Triangulation of data sources and theories;
3. Preserving consistency in all steps of data collection and analysis;
4. Careful documentation of the research materials including process maps, field notes, and the versions of the PMF.
23. The final version of the PMF: Consists of the PDI. Each stage has five components linked by intermediate processes. Identifying the role of time.

The final version of the PMF developed gradually and by restructuring the four-stage PDCA cycle into a three-stage PDI cycle. Each of the three stages has five components linked by intermediate processes which transfer performance between the stages, illustrating the dynamic nature of the CHS performance management.

In an attempt to understand when the performance of the current plan can be improved, the role of time was identified. Thus, the closed loop of the CHS purchasing cycle was changed into a series of open (PDI) cycles.

Summary

The chapter has explained why qualitative research and, more specifically, action research was the appropriate choice of method to carry out the investigation. It provided justification for using this method and provided the details of the data analysis. The chapter also explained tactics used to increase the validity of the results.

Three cycles of this action research were described. Each cycle was composed of several steps. Each step included various research activities by which the data was continually collected, analysed, and verified.

Cycle-1 comprised mostly planning the investigation and reflecting on a set of interviews, which informed a focus on the quality of CHS among other dimensions of providers’ performance.

In Cycle-2, the interview data was formally analysed through coding and generating themes. The analysis of archival documents also revealed the ‘official’ concerns about performance. The results were summarised as the PMF version 1 which was in turn updated to version 2 by gathering additional data in the ALTC conference.

Cycle-3 started with scoring the stakeholders and refining the PMF version 2 via verification in the field. The results led to updating the PMF into version 3 where the primary four-stage format was restructured into three stages. Attending the NGO open day provided further information about measures of service quality at process and outcome stages. Thus, the PMF version 4 encapsulated the latest findings of the
study. The fourth version was validated by a group of managers who had not participated in any of earlier steps. The validators’ comments entailed further modification of CSFs and PIs which are now incorporated in the final version of the PMF.

The next chapter presents the data collected from multiple sources and its analysis concerning the aim of the study and proposed research questions.
4 Data Analysis

This chapter presents the data collected from multiple sources and analysis which was carried out throughout the three cycles of the research. It also compares the findings from the multiple sources to identify concepts relevant to constructing the PMF.

4.1 Introduction

Chapter 3 described the research approach including the collection and analysis processes. This chapter describes the analysis that was carried out throughout the three cycles of this action research. The findings of each step are presented in process maps, figures, and tables that summarise the results. The data analysis is presented under the three cycles. To facilitate following the flow of data analysis, Figure 3.2 is broken down into three figures and shown at the beginning of the analysis of each cycle.

In Cycle-1, reflecting on the interviews led to an initial understanding of stakeholders involved in the CHS purchasing process and performance management mechanisms which are currently used by DHBs to manage their contractors’ performance. The findings from Cycle-1 provided a basis for data analysis in the next cycle.

In Cycle-2, while the development of process maps identified the majority of the stakeholders, interviews were analysed to extract themes. Document analysis reflected the ‘official’ concerns around CHS provision. The interim results were summarised as PMF version 1 that was constantly refined as the research progressed. Analysing the data gained from the ALTC conference provided further evidence on managing the quality of LTC services. This information helped to refine the PMF further and to develop its components in Cycle-3.

In Cycle-3, PMF version 2 was the result of including the findings from the ALTC. In this version, the stakeholders identified using the process maps, document analysis, and the ALTC compiled into a list which was scored by three respondents. The scores given became a basis for ranking stakeholders (Steps 18-21). Consolidating these results and feedback provided by verifiers on previous versions led to revising the PMF into version 3. This version has three stages, instead of four, referred to as Planning-Delivery-Improvement (PDI). This structure of the PMF was
reviewed and confirmed as being more appropriate by respondents who took part in Step 19. Some of these respondents only reviewed the PDI but others also scored stakeholders. Analysing the data from the NGO open day helped elucidate performance indicators for service delivery which were divided into process and outcome indicators. The themes extracted from interviews were reinforced by findings from complementary data sources, culminating in a final list of relevant concepts. The results from validating the PDI entailed refinement of the PMF into version 4 that is introduced as the final version in Chapter 5.

4.2 A Guide for Quotations from Interviewees

Quotations extracted from transcripts support the interpretation of the data. For confidentiality reasons, only the identities of organisations and positions of individuals are included in Appendix 15. This appendix indicates (1) whether the data collection method was an interview (I) or group discussion (GD); (2) whether the interviewee was a participant (P) in the data collection or respondent (R) who took part in verifying the interim results, scoring stakeholders, or validation process, and (3) the research cycle in which participation took place.

Interviewee codes represent their managerial role (M) in DHB (D) which are numbered based on date of interview. For example, M1.D1 is the audit manager in DHB1 who was the first interviewee in that DHB. For service providers, interviewees are presented by NGO and a number according to the chronological order of the interviews.

4.3 Cycle-1 Analysis

As noted in Chapter 3, the fieldwork data was generated using tools such as group discussions, process maps, and interviews. This data was analysed to identify stakeholders, CSFs of performance, and PIs required to measure the performance in each CSF. Figure 4.1 shows the steps of Cycle-1.
The following sections describe the data analysis to identify stakeholders and current mechanisms used to manage the performance of CHS contractors.

**Preliminary map of the CHS purchasing process (Step 4-7)**

After reflecting on the information obtained from two group discussions (GD1 and 2) and a review of archival documents, a preliminary map of the CHS purchasing process was created for identifying stakeholders and their role in providers’ performance. The map was reviewed by M2.D1 then revised to reflect initial linkages between stakeholders. The revised version is shown in Figure 4.2.

Figure 4.2 maps the activities of CHS provision to the PDCA’s stages. Dominant stakeholders are shown in boxes. Stakeholders at the national level were the State Services Commission (SSC), which has public purchasing policies as one of its responsibilities. At the same level, the MOH is the main funder of public health services. At the local levels, the DHB is the purchaser and NGOs provide services to users as specified in the contract. The focus of the study is indicated in Figure 4.2 by the rectangular broken lines around the DHB and NGO boxes. Parts of the health system outside this focus are not addressed here.
This map provides a broad overview of the CHS process. It shows dominant parts of the health system from strategy and policy to service consumption by clients and patients. Despite the simplification, the map outlines the main aspects of service provision and prominent stakeholders, resembling the conventional NPM, which is shown by the dichotomy between DHB and NGO. At this stage of the research, the analysis concentrated only on the Do and Check stages, assuming that plans are implemented and measured by DHBs through the contract with NGOs. However, the scope was later broadened when planning and improvement roles of DHBs were identified.

The preliminary map evolved incrementally throughout the study as other stakeholders were identified. Subsequently, separate maps of HOP and CPS were created.

**Reflection on Interviews (Steps 8-11)**

A reflective analysis of the interviews conducted in Cycle-1 helped to ascertain key stakeholders and how participants in DHBs and NGOs define performance in
providing CHS. The analysis also portrayed the current state of performance management mechanisms that DHBs use to control NGOs’ performance.

4.3.1.1 Performance definitions and dimensions

Respondents in DHBs and NGOs provided different definitions for the performance of CHS providers, reflecting diverse expectations for the contractual relationships. In particular, DHBs pursue maximising VfM via advocating more efficient and effective services, producing better patient outcomes. For example, M4.D1 and M3.D1 in HOP and CPS respectively defined performance as follows:

*Performance is the quality and quantity (volume) of service delivered. There is quite a few ways we can look at volume; the number of clients...Cost effectiveness is an aspect of performance. Ideally its sustainable service, one that we can keep going.*

*Performance means providing a quality service to users. The contract contains certain obligations about how contractors have to perform, even if the quality is not explicitly mentioned in the contract. One thing, for example, is operating hours of pharmacy regarding access. Audit and compliance checks are the only formal mechanism in place to monitor the pharmacies. Otherwise, DHBs do occasionally get reports or complaints.*

On the contractor side, NGOs need to meet the contractual requirements while also seeking sustainable financial performance to keep their business running. While for DHBs better service outcomes means performance, for some NGOs good compliance with the contract’s requirements means quality. This observation impacted the performance indicators proposed for one of the CSFs in the service improvement stage of the PMF discussed in Chapter 5 (see I.7-PIs). In some NGOs’ opinion, fulfilling the patient’s needs also indicates performance. In HOP services, NGO1 and NGO3 provided the following definitions that support the above:

*Performance is set out in the contract specifications. Performance is around the standards that we are required to meet, as the requirements of the contract. So, in the contract they identify certain requirements that they have for us. For example, it might tell us a timeframe for responding to any referral that comes through. So, there is standard, they said, and for us, it requires performance and shows what standard we are supposed to follow to meet the requirements of the contract.*
Meeting the contract expectations, delivering quality services as within that framework (contract) to older people, working collaboratively with other providers to ensure those things are happening, and delivering cost-effective services within the context of the contract

Even the pharmacies that participated in Cycle-2 provided relatively similar definitions of performance. NGO7 and NGO8 stated:

Performance is how well I look after my patients... from a pharmacy perspective performance is customers satisfaction and making sure that they understand what they are taking and why they are taking that and what is important to take it and telling them about the side effects. Because half the time they too afraid to ask the doctor or the doctor doesn’t have enough time so a lot of the time they’re coming and asking us. It’s all about communication and training patients about their prescribed medicines.

Providing high standard service to the public within a certain timeframe that is in our contract with the DHBs. For example, how quickly we must provide prescriptions and what the timeframe is to provide that prescription. Therefore, performance is about procurement and keeping stock level to provide services according to the DHB’s timeframe for dispensing prescriptions to the patients.

Performance indicators are detailed in the contract, including some aspects of providers’ performance and the accountability mandates against which NGOs’ performance is assessed. While the contract is the major lever used by DHBs to regulate their relationship with NGOs, the service managers highlighted the complexities in using performance data collected under the contract. As M1.D2 elucidated:

The contract is a monitoring framework, it’s pretty substantive in my view, and we don’t do much with the information, so conversely we don’t really know what they are doing, sounds terrible, it's true, though. I couldn’t tell you when is a medical pharmacy is really like, I can tell you that they’ve got a contract, I can tell where they are, but I don’t have any deep understanding how good they are, I don’t have visibility across all of them. There are only a few monitoring reports that I see, and most of them are medicine use review (MUR) so we look at them and think the pharmacies have delivered 20 MURs in the last month, how good it is?
Despite providing substantive performance data as required by the contract, managers said that they did not use it because there was no analytical support provided by the organisation. Moreover, the system relies on auditing and reporting, but the data provided does not reflect the service delivery process as it occurs in real time. Therefore, it is not clear to the purchasers how a service is provided and what determines the quality of the service. For example, M1.D3 explained there is insufficient information about quality pharmacy performance, as opposed to financial performance, and nobody records data that service managers need to measure quality.

Although definitions vary depending on the participants’ position and perspective in contracting, a comparison of the definitions provided reveals that the performance of CHS has multiple dimensions. Notwithstanding differences, it can be inferred that parties agree on some dimensions including:

1. The patient is the centre of the process and improving patient health status must be the aim of CHS.
2. Collaboration with other stakeholders such as other service providers is crucial to fulfilling clients needs (NGO3). Likewise, NGO4 stressed the importance of receiving patient information from general practitioners (GPs) regarding prescribed medicines for the LTC clients.
3. Service quality is a dimension of provider performance which needs to be properly managed for ensuring desirable outcomes for clients. DHBs typically assess CHS with VfM obtained from purchased services.
4. Satisfying contract requirements is also another dimension particularly for NGOs. The importance of the contract for NGOs rests on their business sustainability which depends on contract renewal.

However, as noted in the literature review, measuring the quality of CHS is complicated for at least two reasons. First, stakeholders interpret service quality differently according to their perspectives. Second, quality of services, unlike physical products, is hard to measure due to various unique characteristics such as intangibility. Therefore, three strategies used in this study to develop appropriate measures are ongoing stakeholder engagement, continuous quality improvement, and a multiple dimensional approach to performance management.
4.3.1.2 Current performance management of contractors

An initial analysis of interviews also identified the mechanisms (such as performance reporting) that DHBs use to control contractors’ performance.

Although the contract is the reference for assessing providers, contract management in DHBs tends to be an administrative control process that prepares contracting documents to ensure accountability requirements are met. M2.D1 explained the role of contract management in performance management by the following statement:

*From my perspective [contract manager], we are the administrative side of contract management, not relationship management side. So our issues are around the process of creating documents, making sure people sign them, checking to see what comes out of audits, making sure the payments are claimed correctly. We don’t have anything to do with negotiating these contracts; we don’t have anything to do with relationship management of contracts. So, in terms of that kind of area (relationship) they are all set with relationship management side of things.*

The above statement describes the role of contract management in providers’ performance management. Service managers are in direct contact with and handle the performance of providers. Nonetheless, M3.D1 explained that no particular performance assessment mechanism is in the contract:

*DHBs are quite limited in terms of controlling who they can give a contract to, so if Medicines Control gives them a licence, then we will give them a contract that’s pretty much the same in all DHBs. Once they (pharmacies) are in place, it’s very difficult to take the contract off someone. In addition, we don’t have any quality measures and a systematic way of monitoring quality. If Audit and Compliance find something wrong with a pharmacy, they will give them time to rectify what they have done and make changes to their processes. In very serious cases they may suspend their licence (say for three months) but once rectified they can grant them the licence again. If they give them their licence back, we wouldn’t have any choice, and we have to give them a contract again.*

The comment above illustrates that DHBs have fairly low influence over using the results of audit to improve pharmacies’ performance. It is also noticeable that service managers at DHBs would like to have more authority to enforce quality
requirements during the contracting process and to make contract renewal subject to acceptable NGO audit results and client feedback.

The following section summarises the primary mechanisms currently used for managing contractors.

1. Performance reporting

The current system of contract performance management relies on reporting such that NGOs are obliged to report their performance based on performance indicators specified in the contract. In HOP, for example, M4.D1 enumerated mechanisms used in monitoring performance:

(i) The provider reports – quarterly performance monitoring reports. The DHB reports for the planning and funding to the MOH and DiSAC\(^23\). (ii) response to random requests (Minister’s requests or OIA\(^24\)s). (iii) Audit reports (auditors audit the providers who must comply with HCSS and report to DHB and follow corrective actions). (iv) Client complaints. There is complaint process that’s providing information. Clients can complain directly to the DHB (sending a complaint to consumer liaison at the DHB), or they could choose to complain to Health and Disability Commission (HDC) - by writing a letter, and any formal complaint needs to be investigated. (v) At the time of changing the model from FFS\(^25\) to the current one, there was community engagement and focus groups for consultation as a sort of philosophy the way the DHBs has set up

The above extract implies that other government agencies may also request additional information based on their intention to adjust health and social priorities, policies, or strategies. For example, the Health Minister may seek information on an ad hoc basis and require a DHB to respond to that inquiry by either using available data or gathering new data through NGOs or communities.

\(^{23}\) Disability Support Advisory Committee (DiSAC) aims to promote inclusion and participation of people with disabilities and older people in society. Available at: [http://www.adhb.govt.nz/meetings/committees.htm](http://www.adhb.govt.nz/meetings/committees.htm) [accessed on 26 Feb. 16]


\(^{25}\) Fee-for-service
According to some participants, DHBs periodically request additional information from NGOs appending a variation to the contract. M3.D1 explained how these variations can affect performance monitoring:

*Pharmacies would contact me individually if they wanted a variation to the contract, so we have service variations which are very common like special food and Clozapine. We have had workshops or presentations where we talked about proposed or occurring changes to the contract including meetings with pharmacists about the new funding implications.*

As noted, despite being a major mechanism for performance management, reporting is a static method that lacks dynamic features to measure and improve performance.

2. **Service provider audit**

Audits are implemented to ensure that providers’ performance and facilities are in compliance with relevant standards. A service provider audit is mainly categorised into Certification Audits and Provider Audit\(^{26}\). As M3.D1 explained, pharmacies must be certified by Medicines Control before signing a contract with MOH or a DHB. Providers may also be audited at the request of a DHB to assess their performance against the contract.

CHS covers a wide range of health and disability services, and there is no single auditor for all services. An audit needs different specialities because every type of CHS requires various expertise and specific instruments to be properly implemented. The MOH defines providers audit as a means of ongoing quality improvement to ensure providing safe, outcome-focused, and continuously improving health services\(^{27}\). Despite the significance of the audit in ensuring the quality of health services, certification of providers’ competence and audit reports may not necessarily assure the service purchasers that quality of provided services is at the expected level. Auditing service quality was considered to be even more complicated in LTC services. M1. D2 discussed the question ‘how do we know the

\(^{26}\) Audit & Assurance. Available at: [http://centraltas.co.nz/audit-and-assurance/] [accessed 10 Feb. 16]

Pharmacies are actually providing the right services?’ M1.D2 explained the difficulties lie in:

_Pharmacy owners complain that the quality audit is pedantic and its tick-boxing exercise and the DHBs concern that it doesn’t really identify whether or not a pharmacy is a quality provider of services. The audit can’t be too onerous, but it has to be correct. Within the new contract with LTC services, that’s another bit of complexity because they’ve [auditors] got to go through and assess if the LTC services are properly provided by finding:

1- Are the pharmacies screening people properly?
2- Are they coming with medication management plan?
3- Are they delivering medicine synchronisation, reconciliation, reminders…?
4- Are they delivering on what the contract is all about?
5- Are they delivering drugs safely?
6- Are they improving health outcomes with the patient?

The questions raised above imply that quality of LTC service is crucial for DHBs compared with other dimensions, for example, financial performance of providers. The structure of the provider audit was made clearer by interviewees in Cycle-2. M1.D3 provided the following explanation:

_Dividing pharmacy quality into physical and human, then we can see building side has been pretty well laid out, and it’s covered in the audit so if you can pass the audit by the MOH – Medicines Control – audit then it’s done. But the moment you dispensed the prescription and you interacted with the patient that becomes very hazy, and it’s down to interpretation

Similarly, pharmacies explained that audit is the major tool that the MOH applies to assess providers’ performance. For example, NGO7 explained how quality audit impacts their performance:

_There is financial performance reporting. If you are talking about dispensary and customers, there is no real reporting system for that. Of course, we can record our errors, and we can learn from that, but there are no real performance measures...The only performance (quality) management system in place is MOH audit and they have the quality things, and you have to follow them. But there is nothing until five years, nothing in-between_
While reporting is used to control performance, it only covers the financial part. Auditing the quality of providers, on the other hand, appears to be a periodic control taking place every few years which fails to continually measure performance as required to improve service quality.

3. Client feedback

By adopting the patient-centred care model in NZ public health, there is growing attention to assessing clients’ experience of delivered services and using their feedback to diagnose required actions to improve services. Two methods for assessing patient satisfaction are client surveys and complaints. A client satisfaction survey is often implemented by providers’ representatives, asking clients to appraise providers’ performance and their services. As the research progressed, it became apparent that service managers are concerned about the reliability of survey results and how they are used to improve services. In Cycle-2, M1.D3 commented on the 2014 pharmacy satisfaction survey:

_The questionnaire is our first attempt to measure it [pharmacy service quality] but as I say the incentives are very perverse in that questionnaire, and I don’t think that the questionnaire at the moment is going to give us the information that we need. But it’s a start, it’s getting used to asking your patients questions about your service. Ultimately, if you ask it properly and you get the right information back you should actually have a stronger business because you can make the changes suit your customers. But I think people have lost sight of that, and they think I don’t want this thing, it is going to show me bad because I am going to get the punishment._

Complaints are another method to receive clients’ feedback about delivered services, and this is usually administered by the Health and Disability Commissioner (HDC). Although complaints convey negative feedback, signalling mistakes or errors in the delivery process, public purchasers rely on complaints to diagnose failure points and oversee the client’s experience. However, M2.D3 who was involved in integrated care expressed the view that:

_Complaints, I would also balance and measure that of success stories. So looking at complaints, as, well you already know what’s gone wrong, so there’s something we can learn from that but actually why don’t we look at what’s worked really well because there’s a huge amount that we can learn from looking at success stories. So, I think_
focusing always on the negative only gets you so far and what you need to focus on is where, as a system, have we gone over and above and created something fantastic for a patient. Because then that’s where you start turning to innovation. So I would say success stories here as well.

The three methods discussed above presented the key mechanisms for managing the performance of CHS contractors. However, this study was not able to find evidence of an integrated performance management framework *per se* except for the Pharmacy Quality Framework that M3.D1 described:

At this stage DHB doesn’t send pharmacies any feedback on their performance. We (DHB) run workshops for pharmacies only to make clear what they need to do to deliver service or even to get paid or to register patient into an LTC (long term condition) service... The pharmacy portfolio managers and the national project group are working on how to implement a Quality Framework to understand how pharmacies perform, which is more than audit and compliance, looks at how complying they are... not did patients appreciate the service?... have you been following the medication plan for this patient correctly?...or you are just registering them? So we don’t know anything about that

In subsequent interviews, two other CPS managers were asked what stage this framework is at. M1.D2 explained that ‘this framework hasn’t been decided’, and M1.D3 explained that authorities ‘decided to postpone launching the quality framework’.

### 4.3.1.3 Identifying Stakeholders

Stakeholder identification was an iterative process that continued throughout Cycle-1 and 2. As discussed before, the preliminary map of the CHS process suggested that MOH, DHB, NGO, and clients are likely dominant stakeholders. During interviews, participants were asked to indicate stakeholders from their perspectives. While the interviews endorsed the initial key stakeholders, they also identified other stakeholders in HOP and CPS. Thus, process maps of HOP and CPS began to develop. The interviewees were also asked to rank the stakeholders regarding their influence on NGOs’ performance. This initial prioritisation revealed that rankings change depending on the stage of the CHS purchasing process as well as the specific area of CHS.
In HOP, other stakeholders identified by the DHB perspective were mainly agencies who advocate the health of older people such as gerontology services, Alzheimer Auckland (NGO), ARRC facilities, and DiSAC. In the NGOs’ view, other stakeholders were the organisation’s board of directors, other providers, and donors.

In CPS, service managers enumerated other stakeholders including GPs (and other prescribers), hospitals, regulators (e.g. DHBSS and Audit and Compliance), PHARMAC28, and administrative organisations who process contracting and payment. To the above entities, pharmacies added other pharmacies, drug companies, and wholesalers.

Home care providers are often non-profit organisations with a relatively formal structure in which the board of directors is a stakeholder. However, the board is more of an internal stakeholder. CPS has more stakeholders than HOP, which relates to the nature of its process where medicine is part of the service delivery. This information was used to develop the process maps of HOP and CPS. The maps were completed in Cycle-2 when interviews finished.

4.3.1.4 Required improvements to performance

The last part of the interviews asked about potential improvements leading to better performance. Interviewees explained what seemed necessary to improve the performance and quality of services. The opinions varied depending on the interviewee’s role. In HOP, M4.D1 commented:

A weakness is, in terms of client satisfaction, with the survey which is done through our providers. We need to independently understand how clients are finding the service. The most likely thing is that clients are not going to say anything negative, and that is highlighted by the lack of complaints. That’s why the Auditor-General has picked this up because they expect there should be a reasonable number of complaints about service like this

On the other side, the NGOs providing HOP services expressed different opinions. For example, NGO1 stated:

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28 The Pharmaceutical Management Agency (PHARMAC) is a New Zealand government agency that, on behalf of DHBs, decides which pharmaceuticals to publicly fund. About PHARMAC. Available at: [https://www.pharmac.govt.nz/about/](https://www.pharmac.govt.nz/about/) [accessed 17 Feb. 16]
Something about benchmarking. Because we believe that we do really well against other providers, but we haven’t got anything substantial to verify that. I think if we had something like that then it would give us information in other areas to strive towards improvement. At the moment, we don’t truly know. Because we can’t benchmark internally and we haven’t got information from another home care provider.

NGO3 reaffirmed the benefits of comparing performance with other providers and learning about better working practices employed by peers. On the other hand, NGO2 identified the need for communicating information about restorative care by the DHB, training caregivers to improve service, becoming better involved with clients, and enhancing communication with other stakeholders such as hospitals to coordinate the services that discharged clients need at home.

In CPS, service managers mostly expressed views about improving quality. One of the concerns raised by M3.D1 was:

Quality here is not about the products, but the service provided by the pharmacists. At present, we don’t have a good idea whether pharmacies are providing a good service, particularly, to LTC registered people and pharmacies receive a significant amount of money for this group.

Similarly, M1.D3 pointed to patient education as a dimension of service quality as reflected below:

... the main thing is to educate the population of what is quality in pharmacy because I don’t think everybody knows and once they know, going to a better place instead of convenient place. I guess most people get worried how much the medicines are going to cost them and how much effort they have to put to getting them. But they forget the big picture and their health and people don’t understand if they look after themselves well they will have a better life over the aged period. Educating people on what pharmacy should deliver to you is important because most people think about picking the medicine up from a pharmacy, and that is all

Pharmacies were also aware that service managers are highly concerned about quality specifically in LTC services. But they have problems in measuring quality in a way that can meet the DHB’s expectation. Thus, each of them underlined various difficulties. For example, NGO4 expressed it this way:
The need is an integrated patient condition database, particularly for the LTC patients, in order to synchronise different databases used by Pharmacies, GPs, laboratories, etc., however, for GPs it’s already synchronised. This is a task for the National Health IT Board... to manage LTC services, it would be good to have KPIs where we can look at them and see the percentage coming in compliance percentage bands, and see how many people sit where. At the moment, the only KPI is compliance with the medication: taking it or not taking it

NGO7 also emphasised access to patient information as an avenue to improve pharmacies by proposing:

*Having direct access to GPs computer or patients’ information in any way would be quite useful and being able to contact GPs easily because they are busy, and it is difficult to call them so by seeing their notes we can sort out problems ourselves*

Akin to home care providers, pharmacies stressed that benchmarking would enable them to learn from peers and improve performance.

A comparison of the responses shows that both parties think similarly about the need for (1) enhanced communication and collaboration among CHS stakeholders; (2) disseminating service expectations and KPIs of service quality upfront; (3) unbiased measurement of client satisfaction; (4) developing patient information systems; (5) establishing benchmarks.

**Revising the scope (Step 12)**

The initial analysis of the data resulted in narrowing the focus on performance down to service quality. This alteration was informed by an initial understanding that service quality to a great extent indicates providers’ performance. Towards the end of Cycle-1, reviewing the interviews with CPS managers suggested that quality of LTC services is imperative to DHBs. The emphasis led the study to revise the scope of performance in CPS and focus on LTC services where service quality indicates performance. As M1.D2 clarified:

*Measuring quality in an objective way is a very tricky issue to sort out. Any quality framework must be in conjunction with pharmacy sector agents such as Guild, who has to endorse it. For example, a pharmacy consultation room! LTC is a service fee attached to the patient so it’s not transactional. Still fee-for-service but not fee-for-item. The
difficulty is in the large DHBs with many pharmacies, while in small DHBs with a few pharmacies people at the DHB know the pharmacies, the owner, the proprietors and everything is transparent.

The performance in CHS purchasing is mainly indicated by service quality which is not easy to assess. An attempt to improve quality would not succeed unless both human and technical elements are constantly measured and improved. To succeed in improving quality, collaboration between CHS stakeholders is essential.

Data analysis in Cycle-1 shows that performance is defined differently by both parties to the contract but both share the same concern which is the patient. Currently, performance management relies mainly on reporting and auditing which lack continuous improvement features. Another aspect was the significance of quality in measuring performance. Service quality appeared to be even more complex in LTC services. In Cycle-2, the focus on performance, in very broad terms, was narrowed down to quality, particularly for LTC services in the CPS domain.

The next section reports data analysis in Cycle-2 when interviews were analysed by coding to extract themes on performance management. Complementary data is also used to verify the initial interpretations.

4.4 Cycle-2 Analysis

In this cycle the data from interviews, documents and forums were analysed and triangulated (Golafshani, 2003). The purpose of using multiple sources was firstly to examine the extent to which the findings from the interviews are supported by other sources and, secondly, to expand the comprehensiveness of the PMF. Figure 4.3 depicts Cycle-2.
The Development of Process Maps (Step 13)

The preliminary map of the CHS process was developed into HOP and CPS process maps. Interviews in Cycle-2 further developed the CPS process map when the participants elaborated on it. However, developing the process maps continued even after interviews and when more stakeholders were identified through other sources of data (i.e. documents and ALTC).

4.4.0.1 HOP process map

Figure 4.4 is the HOP process map. Stakeholders are classified into three streams, namely funding and accountability, serving older people, and support agencies which play different roles in the delivery of services to older clients.
The funding and accountability stream contains governmental organisations and contracted auditors employed by the public health organisations (either DHB or MOH) to audit and certify the qualification of service providers. The service provision stream indicates how services flow to older clients referred by the Needs Assessment and Service Coordination service (NASC). In the third stream, support agencies are mainly client (or patient) advocates, working for patient support and empowerment by providing education and literacy, as well as protecting patient rights.

### 4.4.0.2 CPS process map

The CPS process map shows more complexity than HOP. One reason is that CPS not only provides services to patients but also deals with the supply of an extensive range of publicly funded medicines. This complex system requires a high level of stakeholder collaboration and process synchronisation. Figure 4.5 illustrates a wide range of processes operated by divergent players in three main streams of funding and accountability, the supply chain of pharmaceuticals, and professional bodies and advocacy services.
Figure 4.5 Process Map of Community Pharmacy Services (CPS) Showing the Stakeholders Involved and Existing Relationships
In the first stream, funding and accountability operations are implemented by government agencies to lead the health system’s performance and allocate public funds appropriately via MOH and DHBs to fulfil the population needs. Other activities in this area relate to quality and financial audits by MOH through its divisions and teams (e.g. Medicines Control, Audit and Compliance, and Sector Services).

The DHB administers funding and contracts through its internal divisions. The public hospitals may refer discharged patients either to the NASC organisations, as MOH contractors, or directly to CHS providers (e.g. community pharmacies and home care providers) for post-discharge treatments. DHBs also establish alliances with other DHBs, such as DHB Shared Services (DHBSS) and Northern DHB Support Agency (NDSA), to outsource some of their operations. NDSA is an example of support agencies working across New Zealand that was identified because of its relationship with the DHBs participating in this study.

Working for MOH, Medsafe is the New Zealand Medicines and Medical Devices Safety Authority responsible for the regulation of medicines and medical devices in New Zealand. It ensures that medicines and medical devices are acceptably safe. Another stakeholder in this stream is PHARMAC that on behalf of DHBs decides which pharmaceuticals to publicly fund.

The middle stream is the supply chain of medicines which starts from supplier companies and ends up with dispensing medicines to service clients. As shown in Figure 4.5, different groups of clients and patients use pharmacy services. Three major groups are core services, LTC services, and specific services provided to clients or patients in Age-related Residential Care (ARRC) and Community Residential Care (CRC) facilities.

The third stream shows the professional bodies and patient advocates; each plays a different role in delivering services. Professional bodies such as the Pharmacy Council of New Zealand are committed to ensuring that pharmacists are

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29 Since 2015, DHBSS is identifiable as a collaborative work in each area of CHS as opposed to an organisation. For example, DHB Shared Services (Health of Older People). Available at: https://www.eldernet.co.nz/Facilities/Service/DisplayService/FaStID/12901 [accessed 22 Jul. 16]

30 NDSA is a shared services agency joint venture owned by the three Auckland Metro DHBs (Auckland, Counties Manukau and Waitemata). Available at: http://www.ndsa.co.nz/ [accessed 10 Feb. 16]

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competent and fit to practice, whereas the Pharmacy Guild of New Zealand provides support and services to community pharmacy owners. Patient advocacy services, similar to HOP, protect and support patients and caregivers. One important stakeholder influencing the quality of services comprises Primary Health Organisations (PHOs) and General Practitioners (or GPs) who refer patients to pharmacies, particularly for LTC services.

A comparison between the two maps reveals that HOP and CPS are provided differently due to the specific funding and service procedures used to purchase each of the services and their unique process flow structure through which their services are provided. For example, CPS is a mix of human services (driven mainly by pharmacists’ competencies) and products (medicines) whereas HOP is predominantly a human service. In addition to individual patients using pharmacy LTC services, CPS has an extensive overlap with specific services provided in ARRC and CRC facilities where clients or patients receive care services in combination with medicines which are often provided by community pharmacies.

Despite the differences between the HOP and CPS process maps, these confirm that client, provider, DHB, and MOH are the key stakeholders in two areas. As mentioned before, these maps continued to evolve by collecting complementary data. For example, in the third stream of the CPS process map, client representatives who voice clients' opinions or feelings about services were identified during conversations at the ALTC conference. Further stakeholders, who are introduced later in this chapter, were identified from complementary sources such as archival documents.

**Generating Themes from Interviews (Step 14)**

The interpretation of the data was an ongoing process in which reflection and comparison were the methods of analysis. For example, reflective evaluation of the interviews revealed that managing NGOs’ performance concerns multiple dimensions among which quality is of crucial importance. In Cycle-2, when interviews finished, the transcripts were coded by NVivo to extract themes. The results of analysis are further abstracted by assigning a concept to each theme.


4.4.1.1 Coding

As Bradley et al. (2007) explain, developing the codes was an iterative process that began by looking for patterns in the data from early stages in Cycle-1. To some extent, coding followed a deductive approach (Miles and Huberman, 1994), using the concepts derived from the PMM literature to structure the codes. Figure 4.6 reports the codes used to organise the interview data. These codes are used to represent DHBs’ and NGOs’ perspectives on fairly similar issues of performance.

In NVivo, the Auto Code function was used whereby each interview question was assigned a code according to the literature. For example, as shown in Figure 4.6, the first interview question in DHBs, which deals with how NZHDS is considered in the contract process, is coded as strategy implementation.

<table>
<thead>
<tr>
<th>Interview Questions</th>
<th>Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Topic of enquiry in DHBs:</strong></td>
<td><strong>DHBs (only service managers):</strong></td>
</tr>
<tr>
<td>1. The context (NZHDS, Policies etc.) in the contract process</td>
<td>1) Strategy implementation</td>
</tr>
<tr>
<td>2. Type of relationship with the providers</td>
<td>2) Relationship management</td>
</tr>
<tr>
<td>3. Interested entity(s) in performance</td>
<td>3) Stakeholder identification</td>
</tr>
<tr>
<td>4. The entities importance in relation to the providers’ performance</td>
<td>4) Performance definitions</td>
</tr>
<tr>
<td>5. Required performance information by each entity</td>
<td>5) Stakeholders ranking</td>
</tr>
<tr>
<td>6. Performance information usage by each entity</td>
<td>6) Stakeholders needs and wants</td>
</tr>
<tr>
<td>7. Expectations for the providers’ performance</td>
<td>7) Stakeholders information usage</td>
</tr>
<tr>
<td>8. Reporting performance results to inform each entity</td>
<td>8) Performance measurement tools</td>
</tr>
<tr>
<td>9. Areas to improve the providers’ performance</td>
<td>9) Performance improvement</td>
</tr>
<tr>
<td><strong>Topic of enquiry in NGOs:</strong></td>
<td><strong>NGOs:</strong></td>
</tr>
<tr>
<td>1. Expectations for the providers’ performance</td>
<td>1. Performance definitions</td>
</tr>
<tr>
<td>2. Performance measurement system for internal purposes</td>
<td>2. Internal performance measurement system</td>
</tr>
<tr>
<td>3. Reporting procedure for the contract with the DHBs</td>
<td>3. Accountability</td>
</tr>
<tr>
<td>4. Interested entity(s) in performance</td>
<td>4. Stakeholder identification</td>
</tr>
<tr>
<td>5. The entities importance in relation to the providers’ performance</td>
<td>5. Stakeholders ranking</td>
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<tr>
<td>6. Required performance information by each entity</td>
<td>6. Stakeholders needs and wants</td>
</tr>
<tr>
<td>7. Performance information usage by each entity</td>
<td>7. Stakeholder information usage</td>
</tr>
<tr>
<td>8. Reporting performance results to inform each entity</td>
<td>8. Performance information system</td>
</tr>
</tbody>
</table>

Figure 4.6 Codes Used for DHBs (Only Service Managers) and NGOs Interviews

Each set of codes reflects the perspectives, interests, and concerns of DHBs or NGOs in managing performance. A comparison between the codes demonstrates that the study sought to explore the opinions of both parties equally. The codes for DHBs in Figure 4.6 were applied only to interviews with service managers. For
coding interviews with a contract manager and a public health physician different
codes, which are shown in Figure 4.7, were used.

<table>
<thead>
<tr>
<th>Interview questions</th>
<th>Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Topic of enquiry for Contract Manager</strong></td>
<td>1.  Contract management</td>
</tr>
<tr>
<td>1. The key responsibilities in contract management</td>
<td>2.  Contract performance measurement</td>
</tr>
<tr>
<td>2. Aspects of contract need to be managed</td>
<td>3.  Strategy implementation</td>
</tr>
<tr>
<td>3. The context (NZHDS, Policies etc.) in the contract process</td>
<td>4.  Relationship management</td>
</tr>
<tr>
<td>4. The relationship of contract manager with NGO service providers</td>
<td>5.  Contract problems</td>
</tr>
<tr>
<td>5. Issues in managing past contracts</td>
<td>6.  Performance improvement</td>
</tr>
<tr>
<td>6. Areas to improve service performance</td>
<td></td>
</tr>
<tr>
<td><strong>Topic of enquiry for Public Health Physician</strong></td>
<td></td>
</tr>
<tr>
<td>1) Quality measures for pharmacies</td>
<td>1)  Quality measures</td>
</tr>
<tr>
<td>2) Quality framework for the primary care and GPs</td>
<td>2)  Primary care quality measurement</td>
</tr>
<tr>
<td>3) Difference between assessment measures and improvement measures</td>
<td>3)  Measurement purpose</td>
</tr>
<tr>
<td>4) Ranking the stakeholders shown in the CPS process map</td>
<td>4)  Stakeholders ranking</td>
</tr>
<tr>
<td>5) Quality measures for pharmacies’ clients</td>
<td>5)  Client quality expectations</td>
</tr>
<tr>
<td>6) information sharing among healthcare actors/stakeholders</td>
<td>6)  Health information system</td>
</tr>
</tbody>
</table>

Figure 4.7 Codes Used for the Contract Manager and the Public Health Physician Interviews

Coding the data generated a set of themes which are described next.

4.4.1.2 Themes

Themes address elements of the PMF required to manage performance in each stage of the CHS purchasing process. The individual themes are provided in Appendix 8.

Given that the topics of enquiry for all interviewees concerned similar issues, the themes were grouped under ten headings which are regarded as the key themes recurring across the responses. Although there were slight differences between DHBs and NGOs pertaining to their role and contracting perspectives, most of the individual themes were similar which enabled this grouping. No individual themes were dropped and are all included in Appendix 8. Figure 4.8 categorises these key themes further into constructs. For the purposes of clarification, each key theme is accompanied by an example theme.
Searching for overlaps and distinctions between the key themes led to identifying three constructs shown in Figure 4.8. These constructs represent areas underpinning performance management.

i. **Accountability.** Managing contractors who receive public resources is guided by regulations set by public funders. While accountability attempts to safeguard the public resources, it also needs to consider the role of contextual factors on performance and communicate with contractors to ensure they obtain service outcomes.

ii. **Stakeholder.** Stakeholder engagement is essential to achieving the service goals and objectives. The study identified a considerable number of constituencies, some involved in every stage of the CHS process (e.g. DHB and NGO), and others involved only in specific stages depending on
their role (e.g. legislators). Communication and collaboration between stakeholders create a convergence of diverse views about performance.

iii. **Performance and Quality.** The analysis shed light on multiple dimensions of CHS performance concerning how well services are provided to clients. As noted in Chapter 2, performance is measured by three dimensions, outputs, quality, and outcomes, where each contains a subset of elements. Although these three dimensions appear to be separate, the analysis revealed that quality of services indicates the extent to which performance satisfies the client’s needs and wants (i.e. effectiveness) while also identifying whether resources are properly utilised to serve clients (i.e. efficiency). Therefore, quality is an overarching dimension of performance which also deals with efficiency and effectiveness of services.\(^{31}\)

The generated themes in this step were modified and developed when evidence from complementary data sources provided more insight into elements constituting performance management of CHS providers.

**Documents Analysis (Step 14 continued)**

As explained in Chapter 3, the Word Frequency function was run in NVivo to identify the ‘official’ perspectives on performance and its dimensions, as portrayed in the relevant public health documents. In the documentary analysis, the challenge was to select sources relevant to the study’s aim from a plethora of documents published in the New Zealand public health sector.

The documents were categorised into three groups around General Health, HOP, and CPS. The selection criteria were the topic of the material, the author or publisher, and the main argument conveyed by the text. Given the aim of the study was to discover the various aspects of performance in CHS, this set of criteria was used to choose documents relating to health service performance from the

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\(^{31}\) This correspondence to the sentiment of The seven Pillars of Quality when Donabedian (1990, p. 1115) proposed that quality of care is an overarching concept encompassing ‘(1) efficacy: the ability of care, at its best, to improve health; (2) effectiveness: the degree to which attainable health improvements are realised; (3) efficiency: the ability to obtain the greatest health improvement at the lowest cost; (4) optimality: the most advantageous balancing of costs and benefits; (5) acceptability: conformity to patient preferences regarding accessibility, the patient-practitioner relation, the amenities, the effects of care, and the cost of care; (6) legitimacy: conformity to social preferences concerning all of the above; and (7) equity: fairness in the distribution of care and its effects on health’. 

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standpoint of a public purchaser. The list of analysed documents is provided in Appendix 6.

4.4.2.1 General Health Documents

The General Health documents are primarily guidelines on provision of public health services. This group contains eleven documents concerning financial and non-financial aspects of the health services (see Appendix 6). The result of the word frequency analysis of this group is illustrated in Appendix 7 (part 7.1). This procedure was repeated for the HOP and CPS documents.

The most frequent phrases emerged as (1) quality, (2) measures, (3) performance, (4) strategy and (5) standards. The quality of health services is the top priority of public health authorities in performance management. After that, measures designed and used to assess quality and performance are important. While strategy defines the expected performance, standards are tools to assess the performance, both of which are emphasised by the documents.

4.4.2.2 Health of Older People Documents

The Health of Older People (HOP) documents specifically highlight health authorities’ thinking and concerns about home and community support services for older people (see Appendix 6).

The result of word frequency analysis of these documents is provided in Appendix 7 (part 7.2). The five most frequent phrases within this sample are (1) support, (2) client, (3) home, (4) strategy and (5) quality. The keywords suggest that the underlying purpose of serving this group of clients is to support them to live independently in their homes. The analysis shows that quality of HOP services depends on how well clients are supported to live independently in their homes, which is consistent with the primary aim of funding these services to facilitate clients ‘living independently in the community’32.

4.4.2.3 Community Pharmacy Services Documents

The Community Pharmacy Services (CPS) documents outline strategic objectives, standards, and major concerns about serving patients who suffer from chronic illnesses known as Long-term Conditions (LTC) services (see Appendix 6).

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The sample for this group included documents from other service areas because those services are provided in conjunction with pharmacy services (in Appendix 6, item 13 of CPS documents). Pharmacies provide services not only to individual patients but also to residents of Community Residential Care (CRC) facilities and Age-related Residential Care (ARRC) which make these stakeholders of CPS. Another reason is the prevalence of using medicine in most health care services meaning pharmacists are inevitably involved. Therefore, the list of selected documents for the CPS is longer and more diverse. It consists of seventeen documents ranging from agreements to standards and audit tools.

The result of word frequency analysis of this sample is depicted in Appendix 7 (part 7.3). The five most frequent words in these documents are: (1) accountability and reporting, (2) quality, (3) performance, (4) information and (5) outcomes.

4.4.2.4 Comparing frequent phrases across the documents

Figure 4.9 summarises the above documents analysis and compares the five most frequent phrases across the three groups of documents.

<table>
<thead>
<tr>
<th>5 Most Frequent Phrases</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Health</td>
</tr>
<tr>
<td>1. Quality</td>
</tr>
<tr>
<td>2. Measures</td>
</tr>
<tr>
<td>3. Performance</td>
</tr>
<tr>
<td>4. Strategy</td>
</tr>
<tr>
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<td>3. Home</td>
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<tr>
<td>CPS</td>
</tr>
<tr>
<td>1. Accountability &amp; Reporting</td>
</tr>
<tr>
<td>2. Quality</td>
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<tr>
<td>3. Performance</td>
</tr>
<tr>
<td>4. Information</td>
</tr>
<tr>
<td>5. Outcomes</td>
</tr>
</tbody>
</table>

Figure 4.9 Five Most Frequent Phrases in the Three Groups of Documents Analysed

The figure shows the phrases are not uniformly used across these documents. Quality is the only phrase that appears among the five most frequent phrases across the three groups inferring it is a common concern of public health officials. The repetition of other phrases depends on the perspective which is either national (in General Health group) or service-specific (in HOP and CPS groups).

In the General Health documents, quality is a priority reflecting national planners’ concern with how well health services work for the population. In the HOP documents, supporting clients is important, explicating the mission of home care services to help people live independently. The CPS documents place accountability and reporting as the first priority which implies that monitoring the performance of community pharmacies is of crucial importance to health officials.
The other four phrases emphasise the key dimensions of CPS performance which comply with the concerns that CPS interviewees raised.

The emphasis on quality implies that patients’ experience with services is a key performance indicator. It can, therefore, be argued that patient-centred care is the dominant approach in providers’ performance management.

The document analysis also helped to identify more stakeholders including Health Quality and Safety Commission (HQSC) and Health and Disability Commissionaire (HDC) who regulate the delivery of CHS.

**PMF version 1 (Step 15)**

The results of analysis thus far were organised as PMF version 1 comprising a list of stakeholders and themes which were tentatively grouped into four categories (quality, funding, accountability, and communication). As explained in Chapter 3, this version was presented at AFAANZ 2013-SIG 8. This version of the PMF was continually modified in the following versions based on the analysis of complementary data, and feedback received from respondents (i.e. scorers and verifiers) within Cycle-3.

My position as an intern made it possible to become an insider (Jönsson and Lukka, 2006) and thus access information about professional health services forums. The forums included the ALTC conference 2014 and NGO open day which provided complementary sources to confirm and clarify the findings from the fieldwork and document analysis.

**Australasia Long-term Conditions Conference 2014 (Step 16)**

The ten key themes emerging from the interviews (Interview key themes) were examined and refined by attending the Australasia Long-term Conditions Conference (ALTC) 2014. In one of the sessions, Professor Chad BoulT, one of the keynote speakers, emphasised that the patient is the focal point in managing LTC services, and every activity must aim to improve patient outcomes.

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Analysing the notes taken during speeches, and based on the conference handbook, generated two sets of themes (ALTC themes) arranged around two of the previously identified constructs derived from the ten key interview themes (Performance and Quality; Stakeholder) as shown in Figure 4.10.

**Figure 4.10 Concepts Identified in the Attended Sessions of the ALTC Conference**

The first cell on the left side informs the stakeholder construct comprising what needs to be done to elevate stakeholder management in health care. It comprises three themes (first cell in box 1) which signal the working relationship among health practitioners and that building trust between them is essential to improving service quality. The second cell on the left side includes fifteen themes (second cell in box 1) about the performance and quality construct. This set highlights the elements required in managing LTC services in the context of patient-centred care. Note that some themes are repeated in box 2 as a consequence of mapping more specific concepts in box to the more general concepts in box 2.

This data was summarised by assigning a relevant concept to each theme (box 2). The relevant concepts were extracted from the literature reviewed in Chapter 2 (see Figure 2.10 parts 3 and 4). In Figure 4.10, some of the concepts repeat frequently. For example, patient-centred care appears to be the most frequent concept (the second cell in box 2). By clustering the repeated concepts the list of
identified concepts was produced (box 3). The identified concepts address dimensions of performance management in LTC services. This list was considered in revising the PMF version 1 when PIs were added in version 2.

**PMF version 2 (Step 17)**

The analysis in Cycle-2 ended by developing PMF version 2 based on the findings from the ALTC. The information obtained through the ALTC confirmed that managing providers’ quality is an ongoing task that requires a tool comprising CSFs and PIs that reflect the needs and wants of service clients.

While version 2 retained its focus on the Do and Check stages, it was stratified into two levels where the first still depicted the PDCA’s stages and the second level was a set of CSFs and pertinent PIs. The CSFs and PIs were built on a comparison between the themes emerging from the research and concepts extracted from the literature.

**The Combined list of Stakeholders (Step 17 continued)**

Stakeholders identified in the various sources of data were included in a single list of CHS stakeholders as shown in Figure 4.11. The reasons for compiling a list were, first, to provide a basis for stakeholder rankings (Step 18 and 19) and, second, to examine whether other entities should be included.

<table>
<thead>
<tr>
<th>Identified Stakeholders</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. District Health Board (DHB)</td>
</tr>
<tr>
<td>2. Service Provider (NGO)</td>
</tr>
<tr>
<td>3. Patient and Family</td>
</tr>
<tr>
<td>4. Clinicians: Primary Health Organisations (PHOs), General Practitioners (GPs), Nurses and other clinicians</td>
</tr>
<tr>
<td>5. Hospitals</td>
</tr>
<tr>
<td>6. Ministry of Health (MOH) in addition to its divisions and teams such as Medicine Control</td>
</tr>
<tr>
<td>7. District Health Board Support Services (DHBSS)</td>
</tr>
<tr>
<td>8. Needs Assessment and Service Coordination service (NASC)</td>
</tr>
<tr>
<td>9. Professional Associations (e.g. Pharmacy Council and Guild)</td>
</tr>
<tr>
<td>10. Community Residential Care (CRC) and Age-Related Residential Care (ARRC) facilities</td>
</tr>
<tr>
<td>11. Patient Support/Advocacy Services (e.g. Alzheimer, Age)</td>
</tr>
<tr>
<td>12. The Pharmaceutical Management Agency (PHARMAC)</td>
</tr>
<tr>
<td>13. Administrative organisations (e.g. Sector Services and Regional Shared Service Agencies)</td>
</tr>
<tr>
<td>14. Suppliers Companies (e.g. pharmaceutical)</td>
</tr>
<tr>
<td>15. National Health IT Board (provides IT supports)</td>
</tr>
<tr>
<td>16. Legislatures (Law and policy makers at national level)</td>
</tr>
<tr>
<td>17. Health &amp; Disability Commissioner (HDC)</td>
</tr>
<tr>
<td>18. Health Quality &amp; Safety Commission (HQSC)</td>
</tr>
<tr>
<td>19. Office of the Auditor General (OAG)</td>
</tr>
<tr>
<td>20. Primary Health Organisation (PHO)</td>
</tr>
<tr>
<td>21. Community Health Representative/Health Consumer Representative</td>
</tr>
<tr>
<td>22. Inter-sectoral or Other Social Services (e.g. Wage and Income NZ- WINZ &amp; Community Housing)</td>
</tr>
</tbody>
</table>

*Figure 4.11 The Combined List of Stakeholders*
The list of stakeholders is drawn from only HOP and CPS participants. Nonetheless, respondents outside these areas confirmed the list is sufficiently complete. For example, M4.D2 working in mental health services commented:

*I think it’s a very generic list, isn’t it? You’ve got the NGO providers who are big for us. You’ve got the PHOs\textsuperscript{35} who are big for us as well. NASC\textsuperscript{36}, always important. You know, we probably don't pay enough attention to the ARRC\textsuperscript{37}. DHB of course, MOH for the planning, yep, hospitals, limited apart from acute mental health units. Yeah, no, so I see the list is relevant, yeah, PHARMAC is not relevant.*

NGO\textsuperscript{9}, who worked for ACC and not DHBs, confirmed that all the stakeholders for their contract are on this list.

In the next section, the identified stakeholders are ranked, revealing that they are prioritised differently in each stage of the CHS purchasing process.

### 4.5 Cycle-3 Analysis

Cycle-3 was mainly about the evaluation of results and reflection on feedback from verifiers and validators. In this cycle stakeholders were scored and ranked. In addition, the PMF’s components were constantly reviewed and modified. Figure 4.12 illustrates Cycle-3 and its constituting steps.

Figure 4.12 Cycle-3 of the Study

\textsuperscript{35} Item 4 in Figure 4.11
\textsuperscript{36} Item 8 in Figure 4.11
\textsuperscript{37} Item 10 in Figure 4.11
Scoring and Ranking the Stakeholders (Steps 18-21)

The ranking was an ongoing activity from Step 18 to Step 21. To rank the stakeholders, an interest-influence score sheet was created. It contains four sections in line with the conceptual framework (see Appendix 10). Respondents scored the stakeholders regarding their interest and influence on CHS provision in the four stages. The scoring scale was from 1 (not interested, not influential) to 7 (very interested, very influential).

Scorers included a Transformation Manager (M2.D3) working on health care improvement and integration, a team of managers working on Adult Rehabilitation and Health of Older People, and a Mental Health and Addiction Manager (M4.D2) working with NGOs providing community-based mental health services.

The detailed scores are provided in Figure 4.13 which shows they differ from respondent to respondent as well as across different stages (i.e. planning, delivery, measurement, improvement). This variability shows that there are different perspectives on the ranking of stakeholders and prioritisation is dynamic depending on the stage in the CHS purchasing process. The ranking of each stakeholder is based on the average score. This is the average of both interest and influence across the three sets of scores.
## Stage 1: Planning (Plan)

<table>
<thead>
<tr>
<th>Stakeholders</th>
<th>M2.D3 Interest</th>
<th>M2.D3 Influence</th>
<th>ARHOP team (GD3) Interest</th>
<th>ARHOP team (GD3) Influence</th>
<th>M4.D2 Interest</th>
<th>M4.D2 Influence</th>
<th>Average Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>MOH (with its divisions and teams)</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>7</td>
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<td>6</td>
<td>7</td>
<td>7</td>
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<td>7</td>
<td>7</td>
<td>5</td>
<td>3</td>
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<td>6</td>
<td>5</td>
<td>5</td>
<td>4</td>
<td>5.00</td>
</tr>
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<td>DHB Shared Services (DHBSS)</td>
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<td>4</td>
<td>4</td>
<td>4</td>
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<tr>
<td>Support agencies (e.g. Alzheimer)</td>
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<td>1</td>
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## Stage 2: Delivery (Do)

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<th>ARHOP team (GD3) Interest</th>
<th>ARHOP team (GD3) Influence</th>
<th>M4.D2 Interest</th>
<th>M4.D2 Influence</th>
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<td>1</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>1.75</td>
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<tr>
<td>Suppliers (e.g. pharmaceutical)</td>
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<td>3</td>
<td>1</td>
<td>3</td>
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<td>CRC &amp; ARRC (Residential care)</td>
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<td>2</td>
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<td>2</td>
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<td>2</td>
<td>1</td>
<td>1</td>
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<td>1.25</td>
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<td>1</td>
<td>1</td>
<td>1</td>
<td>1.00</td>
</tr>
</tbody>
</table>
The interest and influence scores for stakeholders vary by scorer. There are also differences between the three sets of scores given to one stakeholder. For example in the delivery stage, the given scores to HDC differ as indicated by a square on Figure 4.13. Furthermore, scores may be misleading because, due to uncertainty, M2.D3 avoided scoring some stakeholders in each stage that left some cells blank.
As the ARHOP team comprised three managers, the weighted average of scores were also calculated. It was observed that the weighted average does not change the ranks of MOH, DHB and NGOs significantly, but in some cases affected the average score of other stakeholders.

By a comparison of scores (Figure 4.13) with the evidence provided in the literature related to stakeholder engagement, a few differences are apparent.

Firstly, the scores given to the patients’ interest-influence are generally the lowest of the four stakeholders because, except in the delivery stage, patients and clients were assumed to have low interest and influence in service planning, measurement, and improvement.

Secondly, the low scores for GPs and PHOs imply that prescribers, despite their influence over usage of medicine, are not considered to have high interest or influence by this group of respondents. However, as explained in Chapter 1, the main perspective for the PMF is the DHB and thus DHB service managers were selected for the scoring exercise.

Thirdly, the diversity of scores (for example in Figure 4.13, the scores given to HDC in the delivery stage) implies that prioritising stakeholders depends on the respondents’ perspectives and the area of service in which they work. Therefore, reaching a common list of stakeholders that applies to all areas of CHS seems inconceivable. This issue makes the CHS stakeholder prioritisation dynamic and contingent upon service area. As M4.D2 commented:

...to me, the priority of stakeholders, if I was using a process like this [PDCA], the priority of stakeholders, apart from the MOH, typically that always has to be number one. Well DHB MOH first equal. That would be politically appropriate and correct. After that, it would depend on the area you’re working in. You know, patients and service users and the DHB employee, peers, always need to be involved. But after that, particularly, it depends upon the nature of whatever you’re doing. Like PHARMAC, which is a good example. PHARMAC, from my perspective, has no relevance whatsoever.

Mentioning PHARMAC in the above comment confirms that scores for stakeholders vary depending on the area of CHS under consideration. Another influential factor in scoring is the stage of the CHS performance management (i.e. planning, delivery, measurement, improvement). In Figure 4.13, for example GPs
were scored higher in the delivery stage (average score: 3.5) than in the other stages (i.e. average score of planning: 2.83, measurement: 2.33, improvement: 2.83).

Figure 4.14 summarises the average score of key stakeholders in each stage. Key stakeholders across the four stages are confirmed to be the DHB, MOH, NGOs, and Patients and family.

<table>
<thead>
<tr>
<th>Stage of the Theoretical Framework</th>
<th>Ranked Key Stakeholders</th>
<th>Average score (Total:7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Planning (Plan)</td>
<td>1: MOH</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>2: DHB</td>
<td>6.67</td>
</tr>
<tr>
<td></td>
<td>3: NGOs</td>
<td>5.33</td>
</tr>
<tr>
<td></td>
<td>4: Patients and family</td>
<td>3.75</td>
</tr>
<tr>
<td>2. Delivery (Do)</td>
<td>1: DHB</td>
<td>6.33</td>
</tr>
<tr>
<td></td>
<td>2: NGOs</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>3: Patients and family</td>
<td>5.5</td>
</tr>
<tr>
<td></td>
<td>4: MOH</td>
<td>4.83</td>
</tr>
<tr>
<td>3. Measurement (Check)</td>
<td>1: DHB</td>
<td>6.5</td>
</tr>
<tr>
<td></td>
<td>2: MOH</td>
<td>6.33</td>
</tr>
<tr>
<td></td>
<td>3: NGOs</td>
<td>5.67</td>
</tr>
<tr>
<td></td>
<td>4: Patients and family</td>
<td>3</td>
</tr>
<tr>
<td>4. Improvement (Act)</td>
<td>1: DHB</td>
<td>6.5</td>
</tr>
<tr>
<td></td>
<td>2: NGOs</td>
<td>6.17</td>
</tr>
<tr>
<td></td>
<td>3: MOH</td>
<td>5.67</td>
</tr>
<tr>
<td></td>
<td>4: Patients and family</td>
<td>4</td>
</tr>
</tbody>
</table>

**Figure 4.14 Key Stakeholders Based On the Given Scores**

**PMF version 3 (Step 19)**

Comments provided on version 2 led to questioning the inclusion of all four stages of the conceptual framework.

Scorers and reviewers raised doubts on the PDCA-based structure of the PMF (version 2). Their comments were reviewed, and it was realised that the reviewers considered the PDCA to be only suitable for testing changes in short-term projects. It became apparent that Plan and Act are also in the domain of performance management at DHB level and are highly intertwined. In other words, the interconnections between activities of the four stages showed that the PMF cannot neglect the role of planning and improvement in CHS performance. Hence, in the PMF version 3, the Check merged into the Plan, Do, and Act stages. The new cycle has Planning-Delivery-Improvement (PDI) stages constituting a PMF that is more consistent with the nature of the performance management process throughout the CHS purchasing cycle. Figure 4.15 shows that by removing the Check stage and
embedding PIs in the three remaining stages, the PDCA was restructured into a three-stage cycle consisting of Planning-Delivery-Improvement (PDI).

Figure 4.15 Removing the Check (Measurement) Stage and Embedding It in the Three Remaining Stages

The PDI was confirmed by three verifiers in DHB2 (Cycle-3, Step 19). M5.D2 who previously reviewed the PMF version 2 stated ‘PDI is better than the PDCA one, because we normally use the PDCA in projects, for changing services.’ M3.D2 commented that PDI’s structure exhibits the nature of the annual planning process and is ‘a practical tool for purchasers of health and disability services.’ M4.D2, who was a scorer, also confirmed the three-stage structure:

*I like this [PMF]. I think it’s generic enough for people, even mental health, to fit in what they would need to. But there is always a thing that how they look, I like flowcharts because to me this easier to make sense... The key measures, you’ve really got a suite of things you can pick from and put in your own details that work. I suppose, to me, the challenge would be how you would make it look palatable, and goodness knows how you do that. Because I think a lot of people wouldn’t since that’s nice and easy. To me that would be the selling point, to get people to use it.*

**NGO Open Day (Step 20)**

As explained in Chapter 3, Step 20 included an NGO open day which provided the third complementary data source. As service managers in DHBs had expressed
their concerns about the quality of providers’ services, the NGO open day\(^{38}\) was an opportunity to specifically ascertain the providers’ measures of service quality. Ten NGOs answered the following question:

- What is your Key Quality Measure for the services provided to your clients?
  - one measure for *During Delivery (Process)* and
  - one measure for *Post-Delivery (Outcome)*

The respondents were asked to elaborate on their answers when needed, and notes were taken to record the conversation. The analysis of this data led to identifying the third set of themes (NGO open day themes) organised into two groups around service process and service outcome indicators. Table 4.1 shows the themes generated including 18 for process and 17 for outcome. In the table, the column of service outcome indicators contains fewer themes because the NGO providing Community Cultural Support declared that their services are informative rather than being a specific CHS.

<table>
<thead>
<tr>
<th>Service type</th>
<th>Service Process indicators (total:18)</th>
<th>Service Outcome indicators (total:17)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Palliative Care</td>
<td>1. Referral &amp; Needs assessment</td>
<td>1. Client feedback</td>
</tr>
<tr>
<td></td>
<td>2. Qualified carer</td>
<td>2. Narrative measures</td>
</tr>
<tr>
<td>2. Violence Reduction</td>
<td>1. Access to services</td>
<td>1. Results of service</td>
</tr>
<tr>
<td>3. Home Care Services</td>
<td>1. Referrals &amp; Needs Assessment</td>
<td>2. Client feedback</td>
</tr>
<tr>
<td>(all ages)</td>
<td>2. Nursing services</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. Incident reporting</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4. Goal-setting</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5. Patient centric care planning</td>
<td></td>
</tr>
<tr>
<td>4. Community Cultural Support</td>
<td>1. Client feedback</td>
<td>1. Integrated care to synchronise</td>
</tr>
<tr>
<td></td>
<td>2. Post-discharge support services</td>
<td>patients information with different</td>
</tr>
<tr>
<td></td>
<td></td>
<td>providers</td>
</tr>
<tr>
<td>5. Respite care</td>
<td>1. Client feedback</td>
<td>1. Independence level</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Helping out family</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Physical &amp; Cognitive conditions</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4. Socialisation activity</td>
</tr>
<tr>
<td>6. Home Care Services</td>
<td>1. Referrals &amp; Needs Assessment</td>
<td>1. Independence level</td>
</tr>
<tr>
<td>(Older People)</td>
<td>2. Scenario-based goal-setting</td>
<td>2. Health status</td>
</tr>
<tr>
<td></td>
<td>3. Client feedback</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Attained goals</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Root cause analysis</td>
</tr>
<tr>
<td>10. Dementia</td>
<td>1. Compliance</td>
<td>1. Independence level</td>
</tr>
</tbody>
</table>

Table 4.1 shows that a recurring response was that the quality of service during delivery (process) is measured based on the results of needs assessment activities. For service outcomes, respondents pointed out various indicators, with several indicating condition of the client (i.e. health, life, independence) and client feedback. However, client condition was described variously depending on the type of service. For instance, for the ‘Respite Care’ providers, health status is an outcome while for the ‘Literacy Services’ the level of student success indicates an outcome. Thus, an advantage of speaking with NGOs who had not participated in the previous interviews was to understand how service quality is assessed in other community-based services, such as Literacy.

Some NGOs nominated client feedback as an indicator of service process whereas others stated that it indicates service outcomes. The varying opinions about client feedback implies, to some extent, a difficulty in distinguishing between process and outcome indicators particularly whether patient satisfaction is a process or outcome indicator (Gill and White, 2009).

The analysis of the NGO open day data is summarised in Figure 4.16. The analysis involved sorting the NGO open day themes in an ascending order that shows how many times each theme repeated (box 1). Similar to the analysis of the ALTC data, relevant concepts are assigned to each theme (box 2). This is done to search for similarities and, if they exist, new concepts. The existence of repeated relevant concepts resulted in a reduced set of identified concepts, namely 8 for process and 5 for outcome (box 3).
Thus, the first performance indicator of the process group is compliance with needs. In the outcome group, the first indicator is quality of life (QoL) in its broad sense including health and life conditions. As previously noted on page 134, some concepts in box 2 are repetitive.

Nonetheless, measuring outcomes is as yet underdeveloped in the current contracting arrangements. For example, M5.D2, working on service development, explained the status of outcome measurement:

*My biggest thing is once you have contracted something out, what is your monitoring framework? Often volume based. Volume based does not mean you will get the patient outcomes. So, you can say you will screen your population for whatever the risk is, to whatever the given target. You’re funding now, but that doesn’t mean, after screening, the quality of care is likely to lead to better management. So, that’s where most of the contracts so far have been based on volume. They’re volume driven, or they’re outcome driven. What I mean by outcome is the patient outcome... the real improvement will happen when we start using the data for management or data for outcomes. At the moment, even the data is for volumes.*

Both forums (ALTC and NGO open day) enriched the understating of the CSFs and PIs required in the PMF. Overall, however, the findings from multiple sources confirm that the key concern is the CHS clients’ experience with services indicating the actual quality.

**Conceptualising the results (Step 20 continued)**

As depicted in Figure 3.1, the necessary components of the PMF were identified and refined step-by-step as the research progressed. While the majority of themes emerged from interviews, complementary studies increased understanding of them. The ALTC conference shed light on, for instance, some dimensions of patient-centred care such as self-management and prominence of patient outcomes which are crucial in managing LTC services. The NGO open day elucidated that providers, for example, consider client feedback to measure the quality of the delivery process and when delivery is completed the client's condition is considered to assess service outcomes. This evidence led the research to recognise that a client’s needs and wants is the focus of performance in the three stages of the PMF.
Data sources at this stage consisted of interview key themes (box 3 in Figure 3.1), document analysis key phrases (box 4 in Figure 3.1), ALTC themes (box 5 in Figure 3.1), and concepts relevant to NGOs’ PIIs for assessing quality at process and outcome levels (box 6 in Figure 3.1).

Referring to the abductive model of the study (Figure 3.1), conceptualising the results involved two phases as following:

1. The themes that emerged from the three sources of data were compared with the concepts extracted from the literature reviewed in Chapter 2. (Phase 1 took place through boxes 3 to 6 in Figure 3.1). During the conceptualisation phase 1 refinement of the interview themes continued and similar (or additional) themes reduced into a smaller number.

2. The conceptualisation phase 2 used the results of the phase one to confirm and clarify the interview themes and finalise their relevant concepts. These concepts reflect underlying components required for the construction of the PMF. (Phase 2 took place in box 7 in Figure 3.1)

Figure 4.17 presents the final list of the relevant concepts. From left to right, the first column contains the key constructs listed in Figure 4.8 (i.e. Accountability, Stakeholders, Performance and Quality). The middle column contains ten key themes derived from interviews and reported in Figure 4.8 as well. The third column contains the relevant concepts extracted from the literature reviewed in Chapter 2 (i.e. Figure 2.10). The relevant concepts represent individual interview themes which are available in Appendix 8.
### Figure 4.17 The Final List of the Relevant Concepts

<table>
<thead>
<tr>
<th>1. Accountability</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1.1 Contextual factors</strong>&lt;br&gt;affect service delivery and results</td>
</tr>
<tr>
<td><strong>1.2 Managing contract relies on communication and relationships</strong></td>
</tr>
<tr>
<td><strong>1.3 Accountability spans from resources to person outcomes</strong></td>
</tr>
</tbody>
</table>

#### 2. Stakeholder

| **2.1 Engage stakeholders in various steps of service process** | Relevant Concepts:<br>2.2.1.1) Provider engagement<br>2.2.1.2) Stakeholders engagement<br>2.2.1.3) Stakeholders collaboration<br>2.2.1.4) Stakeholders trust<br>2.2.1.5) Mitigating the conflict of interests |

#### 3. Performance and Quality

| **3.1 CHS performance management is dynamic** | Relevant Concepts:<br>3.3.1.1) Performance monitoring systems<br>3.3.1.2) Integrating improvement<br>3.3.1.3) Improvement versus judgemental measurement<br>3.3.1.4) Dynamic performance monitoring<br>3.3.1.5) Integrated quality measurement<br>3.3.1.6) Incentivising and rewarding<br>3.3.1.7) Intervention/change management<br>3.3.1.8) Effective communication of changes<br>3.3.1.9) Effective communication of standards<br>3.3.1.10) Continuous improvement |
| **3.2 Quality of service is assessed by a client** | Relevant Concepts:<br>3.3.2.1) Patient satisfaction<br>3.3.2.2) Self-management<br>3.3.2.3) Quality (process): dimensions: *Tangible, Reliability, Responsiveness, Assurance, Empathy, Accessability*<br>3.3.2.4) Equity<br>3.3.2.5) Patient-centred care<br>3.3.2.6) Service staff skills (i.e. assurance)<br>3.3.2.7) Goal-setting<br>3.3.2.8) Compliance with needs and wants |
| **3.3 Service efficiency is a trade-off between cost and quality** | Relevant Concepts:<br>3.3.3.1) Needs assessment<br>3.3.3.2) Casemix funding<br>3.3.3.3) Utilisation |
| **3.4 Service outcomes indicate effectiveness** | Relevant Concepts:<br>3.3.4.1) QoL and Well-being<br>3.3.4.2) Performance-based contracting |
| **3.5 Audit quality is to ensure the quality of service tools** | Relevant Concepts:<br>3.3.5.1) Accreditation<br>3.3.5.2) Physical & facility compliance<br>3.3.5.3) Compliance of working practices<br>3.3.5.4) Integrated audits |
| **3.6 Strengthening providers to deliver quality services** | Relevant Concepts:<br>3.3.6.1) Continuous education of staff<br>3.3.6.2) Strengthening organisational systems and capacities<br>3.3.6.3) Establishing benchmarks for providers |
Comparing the concepts shows some overlap. For instance, the ‘effective communication’ concepts (column 3, items 3.3.1.8 and 3.3.19) imply a relationship with other parties is relevant to the stakeholder construct (column 1, item 2). This overlap reflects that successful performance management of CHS depends on a constant communication between stakeholders. The PMF is built on the three overarching constructs (in the left most column of Figure 4.17) show that accountability, stakeholders, and performance and quality constitute provider performance management. As shown above in Figure 4.17, each of these three areas contains various aspects, each of which needs to be monitored and assessed to ensure their alignment with clients’ needs.

Chapter 5 uses these concepts and the literature on PMM and quality of health care services, to construct the final PMF.

**PMF version 4 (Step 21)**

In Chapter 2, section 2.5 discussed the RQ1. One of the objectives set was to cluster stakeholders into groups based on the similarity of their roles or interests in CHS. The stakeholders were ranked based on scores given in Steps 18 and 19. Then, they were clustered into stakeholder groups. These clusters reflect stakeholder groups identified in the literature (Smith et al., 2008; Provan and Milward, 2001; Pouloudi and Whitley, 1997; Bolland and Wilson, 1994b). Figure 4.18 exhibits eight groups of stakeholders who are involved in CHS process.

39 Who are the relevant stakeholders in contracted Community Health Services (CHS) and is there a ranking in terms of interest and influence?
There are four entities in the group of key stakeholders. They are consistently highly scored. However, their scores within the group vary in each stage. For example, patients and family were scored more highly in service delivery than in the other stages (see Figure 4.13, stage 2: Delivery).

Chapter 5 will show that a problem with grouping individual stakeholders is that it conceals the dynamism between the stages. It is, therefore, preferable to keep stakeholders identified individually to reveal how their rankings change between stages40.

A significant change incorporated into the PMF version 4 was the insertion of client’s needs and wants as the performance focus in the PDI. This insight was gained by reflection on the emphasis placed by almost every participant on clients and the growing literature on patient-centred care. For instance, M2.D3 stated:

I think if you use the principles of patients and then frontline staff as close as possible to all of this process, and whether they do that via a professional body or via a kind of

---

40 However, grouping can be used to build inter-organisational systems, which as Pouloudi and Whitley (1997) suggest, help to reduce efforts to provide stakeholders with required information on performance and avoid duplication.
mechanism by which they engage. But if the principle is that we have those people at the centre of everything we do, then I think we’ll get better quality in terms of the outputs.

Another major change was the formulation of a performance goal for each stage of the PDI. The need for goals was identified by reflection on evidence from the two forums (i.e. ALTC and NGO open day) where goal-setting and measuring the attainment level appeared as a theme on the performance and quality construct (see the identified concepts – column 3 – in Figures 4.10 and 4.16). Performance goals for each stage were later refined using responses from the GD4 as reported in Appendix 13.

Validation of the PMF (Step 22)

Action research is regarded as a cooperative research method involving practitioners (Lewin, 1946). An avenue to ensure the validity of qualitative results is confirmation by practitioners (Miles et al., 2013). As explained before, experts in the field were constantly asked to verify the versions of the PMF.

A group of managers from other DHBs, who had not participated in any of the earlier steps of the study, conducted the final validation. This group confirmed that the CHS performance management is better displayed by the PDI than the original PDCA framework. For example, one manager (V2.GD4) commented that ‘this [PDI] appears to be a good start, but I would like more time to consider it as I can see a lot of benefits here.’ Validators also commented on performance goals, CSFs and PIs by filling out a questionnaire (see Appendix 12). These comments were considered in the final version of the PMF as discussed in Chapter 5.

However, the acceptability of a PMF depends on diversified views of potential users about what constitutes performance, and how it should be managed. For example, in response to whether system-level measures are preferable to service-specific measures, M4.D2 commented:

Well it’s all dependent on the level you’re working at, isn’t it? We’re working with NGO’s. We don’t want system-level, we want on the ground. We want to know service users are getting a service and something’s improving in their lives, hopefully from the service...
To sum up, the PDI was considered as a relevant model for managing the performance of CHS providers, even by those who had not participated in its construction.

**Intermediate processes of the PDI and Multi-Level Accountability**

Towards the end of the research steps, it was realised that some processes transfer performance between the PDI three stages. Two sets of ‘intermediate processes’ were identified. Contracting, evaluation, and intervention are distinguished as the first set for three reasons. First, the participants emphasised the efficiency of contracting procedures, hence contracting needs the specific attention of health authorities to effectively convert plans to services. Second, a large group of public service researchers called for attention to outcomes and succinct evaluation of underpinning causes while managing public services (e.g. Carman, 2010; Behn, 2003; Heinrich, 2002). Thus, evaluation is required to identify the actions required to improving plans. Third, while Campbell (2008) addresses the prominent role of change management principles in improving health care, M1.D3 also praised the role of change management in improving the performance of pharmacies while acknowledging that some do not adopt this practice:

*I tend to change management as well in order to sell them [pharmacies] the new strategy, and hopefully, they will make minor changes along the way, but some of them are looking at their own business and keep doing what they are.*

Change management is captured by the term intervention. Thus, intervention is placed as an intermediate process achieving service improvement. The second set of intermediate processes is comprised of feedback loops signalling remedial actions that are viable in short-term which are different from major improvements.

**Creation of a Generic Map of CHS Provision and Accountability Processes**

It was also realised after analysing the stakeholders that a generic map of CHS provision and accountability processes could be developed (Figure 4.19). This map outlines the major existing relationships between stakeholders involved in various aspects of the CHS provision. This map draws on the insights gained from the development of the HOP and CPS process maps in Step 13 (Figures 4.4 and 4.5).

Figure 4.19 portrays a broad view of the CHS processes and their stakeholders. Four levels of the CHS process are shown for funding, purchasing, providing, and
consuming and their respective stakeholders. Key stakeholders presented on the left side of Figure 4.19 are explicitly involved in the CHS provision process and represented by the dark blue arrows labelled a, b, and c. Other stakeholders are shown inside the light green boxes on the right side of Figure 4.19.

The map displays the overlap between four levels of the CHS provision including funding, purchasing, providing, and consuming. The overlap implies there is no solid border between areas (e.g. purchasing CHS overlaps with providing CHS). It can, therefore, be inferred that stakeholders need to collaborate in decision-making to mitigate the conflict of interests between stakeholders.

This map highlights that stakeholders’ rankings change depending on their role in each layer of the process. For example, health care organisations are more concerned about performance in providing and consuming (delivery) levels than in purchasing. This is because poor performance of providers may result in readmission of patients to hospitals. The reason for inserting the Measuring and Assuring Performance and Quality box in the purchasing level is because the audit and quality assurance functions are separate from purchasing but are still at DHB level.
The generic map of CHS provision and accountability processes provides a broader view, than does transactional accountability, on who can affect CHS performance. Figure 4.19 demonstrates that along with formal accountability, there is plentiful feedback from service clients. As M2.D3 commented:

*I think that it [PMF] needs to reflect where we are in a policy direction at the moment, in terms of adding value to a patient’s journey and looking across the system... we need a circular process in terms of identifying the people that we can draw in real time to get experience from... Let’s not make it an overly bureaucratic and driven by a whole bunch of people within DHB. Let’s make it something real that people can understand. And if we speak in patient language, actually then our staff will understand it as well. I think we overcomplicate these things and overfill it with a lot of jargon, that we need to throw a whole bunch of that away and say, how do we get a true understanding of what our community wants and needs and have all of that reflect in the way in which we do our planning processes?*

It can be concluded that accountability extends beyond contractual control mechanisms when clients are directly affected by the quality of CHS. Therefore, purchasers need to include clients’ feedback into accountability systems to adjust strategy and policy to reflect clients’ needs and wants.

**Summary**

The chapter began by analysing the data obtained during Cycle-1 to identify stakeholders and the current state of the CHS performance management. The initial findings in Step 12 showed that the major concern in provider performance is the quality of LTC services, which resulted in revising the scope of the research to focus on LTC services.

In Cycle-2, process maps were developed and more stakeholders were identified. As interviews were completed, themes were systematically generated. The emerging themes were abstracted into key themes which were categorised into three constructs comprising accountability, stakeholder, and performance and quality, reflecting the major areas of the CHS performance management. The documents analysis extended the number of stakeholders previously identified and indicated that health officials are more concerned about quality than other dimensions. The interim results were used to form PMF version 1. The analysis in
this cycle ended by extracting themes from the ALTC conference to assist in finalising the relevant concepts.

The data analysis in Cycle-3 commenced with refining version 1 based on a comparison of findings from the ALTC with the themes emerged from the interviews. Hence, PMF version 2 consisted of elements modified from version 1 in addition to a combined list of stakeholders. The list was then presented to a group of respondents who scored identified stakeholders. The analysis of these scores led to identifying the rankings which varied depending on the service and stage of the PMF. PMF version 2 was reviewed by one scorer and two other participants whose comments prompted revisions that led to version 3.

PMF version 3 comprised three stages named Planning-Delivery-Improvement (PDI) which was confirmed by three verifiers. Findings from the NGO open day provided further insights into indicators of quality at process and outcome levels. The extracted themes from the ALTC conference and NGO open day were presented and conceptualised. The concepts identified in these data sources and key phrases emerged from analysing the archival documents were used to develop the final concepts relevant to the interview themes. As a result, a list comprising three constructs, ten key interview themes and their relevant concepts culminated the findings of the research representing multiple dimensions of the CHS performance management. These concepts provided a basis for the CSFs and PIs that will be developed in Chapter 5.

At the end of Cycle-3, a group of respondents who had not participated in any earlier parts of the study validated PMF version 4. Their comments informed the refinement of PIs to be incorporated in the final version in Chapter 5.

The data analysis and consequent results described in this chapter establish a ground for construction of the final version of the PMF, which is the subject of the next chapter.
5 The Construction of the Performance Management Framework (PMF)

This chapter introduces the final PMF. A graphic depiction summarises its three stages and constituting components. Then, five components of each stage are discussed. The chapter concludes with a discussion of findings and outlines the insights obtained via the development of the PMF.

5.1 Introduction

Chapter 4 explained how the data was analysed to produce a final set of concepts addressing the elements required in the PMF. It also discussed how, by embedding the Check in the Plan-Do-Act stages, the study developed a new structure consisting of Planning-Delivery-Improvement (PDI) stages. This chapter describes how, based on the findings throughout the three Cycles of this action research and in the light of the reviewed literature, the final version of the PMF was constructed.

The final version of the PMF is a three stage cycle (PDI). Each stage has five components which are informed by the final list of relevant concepts presented in Figure 4.17 and the suggestions that validators provided in GD4. The suggestions are available in Appendix 13. The five components are (1) focus of the stage, (2) performance goal, (3) the key stakeholders, (4) critical success factors (CSFs) and (5) performance indicators (PIs). The first component, the focus of performance, appears across all three stages of the PMF whereas the other four components are exclusive to each stage. An additional component of the PMF that is independent of the PDI is the intermediate processes which transfer performance between the stages.

The chapter first provides an overview of the five components. A graphic depiction of the PMF appears in Figure 5.1. Then, the construction of the five components is explained. Finally, the discussion of the results sets out the learnings of the study through which the research contributes to the field of performance management and particularly of the CHS purchasing process.

5.2 The Components of the PMF

The PMF is built on the Planning-Delivery-Improvement (PDI) stages. Each stage comprises five components, three of which arose from the original research
questions (stakeholders, CSFs, PIs), and two identified as the study progressed (focus, performance goals). The five components are as follows:

1. The focus of the stage clarifies the high-level aim in managing the performance in each stage
2. Key stakeholders of CHS are ranked variously depending on their interest in and influence on performance at each stage
3. Performance goals translate the focus to the main purpose of managing the performance in each stage
4. CSFs are critical areas of performance required to be monitored and managed to ensure achievement of the performance goals
5. PIs are assigned to each CSF to monitor performance in each of the critical areas

In addition to the above items, the sixth component is intermediate processes transferring performance between the three PDI stages and providing feedback. These processes are considered as components rather than stages of the PMF. Excluding PIs, other components of the PMF are presented in Figure 5.1.
Figure 5.1 The Multi-Stakeholder Framework for Performance Management of CHS Contractors
The five components are briefly introduced next. The discussion of the intermediate processes is provided later under section 5.4.

5.2.1 Focus of the Stage

Patient-centred care assumes that client’s needs and wants drive all activities undertaken in a health care system (The U.S. Institute of Medicine, 2001). These needs and values are constantly changing and make the public health sector dynamic (Boland and Fowler, 2000). Similarly, proponents of performance accountability emphasise that the common purpose of public services is the fulfilment of clients’ needs and wants (Friedman, 2009; Heinrich, 2002; Wandersman et al., 2000).

The fieldwork and themes consistently showed that managing the performance of CHS contractors requires the entire purchasing process to focus on satisfying clients’ needs and wants within the constraints of available resources. Therefore, client’s needs and wants is the focus of performance in each PDI stages. As shown in Figure 5.1, needs and wants continuously change, necessitating a dynamic approach to performance management of CHS contractors.

5.2.2 Stakeholders of CHS

Chapter 4 described how CHS stakeholders were identified, prioritised, and grouped. The PMF aligns the group of key stakeholders to the diagram. Appendix 14 provides the complete list of ranked stakeholders in each stage. Figure 5.1 shows that the key stakeholders regularly have the highest interest and influence in CHS performance, but in each stage, their relative ranking changes.

The study identifies existing stakeholders interested in the performance of CHS providers and the quality of their services and reveals that their rankings vary across different stages of the PMF. Incorporating stakeholders into the PMF indicates who must be considered at which stage of the performance management process of CHS.

5.2.3 Performance Goals

Goals and objectives specify the desired results. Actual performance is evaluated with goals and objectives and improvements carried out to achieve them (Ferreira and Otley, 2009; Chenhall, 2005; Rockart, 1979).

Given clients’ needs and wants as the focus of health service performance in New Zealand (Boon, 2012) and other countries (e.g. International Alliance of
Patients' Organisations, 2014), each stage of the PMF will need specific goal against which to assess and guide performance. Step 21 of the study proposed three performance goals that align with the PDI stages, respectively. These goals were modified in the following step based on the validators’ suggestions (see Appendix 13).

5.2.4 Critical Success Factors

Critical success factors (CSFs) are the areas of performance that need to be successfully managed to ensure goal attainment. Rockart (1979) suggests that there are only a few critical areas that need to be managed.

Step 17 proposed initial CSFs based on the interview themes and these were refined in Cycle-3. Each stage of the PDI is aligned with a set of CSFs, tailored to the performance goal identified for the stage.

5.2.5 Performance Indicators

Performance indicators (PIs) are an integral part of performance measurement. PIs can measure the productivity, quality, timeliness, effectiveness, and cost-effectiveness of public sector performance. Stakeholders can use PIs to measure performance progress towards specified goals (Neely et al., 2002; Kopczynski and Lombardo, 1999; Wholey and Newcomer, 1989). Defining the relevant PIs draws on both issues identified throughout the study and arguments found in the relevant literature. As opposed to being an exhaustive list, the PIs reflect major aspects of each CSF based on the field work and the literature.

A set of PIs is tailored to measure the CSFs associated with each PDI stage. In choosing the PIs, the study applied the following principles.

1. Given the distinction Fitzgerald et al. (1991) draw between determinants and results of performance, each PI is either a ‘determinant’, operating as a prerequisite for performance, or ‘result’ of performance.

2. Referring to the three stages of the health care process (Donabedian, 1966), each PI is interpreted as a measure of ‘structure’, ‘process’, or ‘outcome’ of services. In some cases, however, PIs can indicate performance at process or outcome levels. Hence, the additional category of process-outcome is used to convey the duality.
3. Lipe and Salterio (2000) differentiate common from unique measures of business performance. In health care, Patrick and Deyo (1989) also differentiate generic from disease-specific measures of outcomes. The PIs for the PMF are generic measures of outcomes in LTC services concerning the overall well-being of the patient. Although specific measures will be needed for specific treatments or areas, these are more appropriately managed on a situation-specific basis. Otherwise, the PMF would contain a very large number of PIs of which only a subset would be relevant for the particular setting. For example, Figure 5.3 contains a PI (\textit{D.4-PI4}) which is a measure that will depend on whether the patient condition is vascular, diabetes or asthma.

The origin of each CSF and PI is specified to show whether it is drawn from the literature review (\textit{Lit.}), the fieldwork summarised in Figure 4.17 (\textit{Fig. 4.17- item number}), the validators’ suggestions in Appendix 13 (\textit{Appx. 13}), or a combination of two or three sources (e.g. \textit{Lit., Fig.4.17-1.1.1.1, Appx.13}). The following section discusses three stages of the PDI with associated components.

\textbf{5.3 Three Stages of the PDI}

In Chapter 3, the action research cycles describe the five iterations used to develop the PMF, and how the four stages in the initial conceptual framework were revised into three stages. The three stages of the PDI process are explained next.

\textbf{5.3.1 Stage 1: Service Planning (P)}

\textbf{5.3.1.1 Focus of the stage}

Client’s needs and wants are invariably the focus of performance in all stages. The performance of service planning hence focuses on designing services to meet needs and wants which continually change. Figure 5.2 shows the five components of the service planning stage.

\textbf{5.3.1.2 Key stakeholders of service planning}

Key stakeholders in the first stage are respectively MOH, DHB, NGOs, and Patient and family. The rankings of other stakeholders in this stage are shown in Appendix 14.
5.3.1.3 **Performance goal: ‘Delivering services required to maintain and regain personal wellness and to increase the health of the community with limited resources’**

The above statement specifies the purpose of activities carried out during planning while considering limited available resources. That is, based on the results of population needs assessment, public purchasers determine what services are required, such as physical exercise or immunisation, to prevent diseases or alleviate the consequences of inevitable conditions such as chronic illnesses or ageing. Next, the purchaser needs to plan for providing the clients or patients with services to achieve and maintain their wellbeing using various types of care. For example, in HOP services, a performance goal can be set out as empowering older persons to live independently.

However, limited resources for operationalising these plans oblige purchasers to establish accountability mechanisms to ensure that resources are used effectively to accomplish desired outcomes (Brinkerhoff, 2004; Heinrich, 2002; Ramanathan, 1985). Although the purchaser-provider split emphasised financial accountability for using public funds (e.g. Brinkerhoff, 2004), outcome or result-based accountability (RBA) draws attention to the results of provided services instead of relying only on financial performance (e.g. Heinrich, 2002). This approach to accountability elevated efficiency-based measurement in public contracts to effectiveness-orientated measurement, in which contractors are liable for deliverable results along with other accountability mandates. Therefore, performance-based contracting (PBC) has been developed as a tool to determine the desired outcomes for providers while also considering outputs and quality dimensions (Martin and Kettner, 2009; Martin, 2005a).

5.3.1.4 **CSFs for Service Planning**

Five CSFs in service planning were identified through the research and adjusted to concepts extracted from the literature. The CSFs are the areas of planning which service purchasers need to monitor and assess regularly to ensure the planning process respects clients’ needs and wants and the performance goal of the stage. Figure 5.2 presents the CSFs in the service planning stage.
Figure 5.2 Stage 1: Service Planning (P)
P.1 Population-based needs assessment [Lit., Fig. 4.17-3.3.3.1, Appx. 13]

Time spent in the Planning and Funding Department of DHB1 revealed that assessing population needs for CHS initiates service planning. Purchasers anticipate the services that need to be contracted from qualified providers. Likewise, CHS purchasing cycles usually start with assessing health needs to deliver required services (Shaw et al., 2013; Clark et al., 1995).

P.2 Engaging service clients (or patients) [Lit., Appx 13]

Patient-centred care stresses that clients must participate in making decisions about their care (Berwick, 2009; The U.S. Institute of Medicine, 2001). In this study, client involvement in the service process emerged as a theme which is conceptualised as ‘stakeholders’ engagement’ (see 2.2.1.2 in Figure 4.17).

Sepucha et al. (2008) argue that measuring the extent of client involvement in medical decision-making is difficult because, for instance, caregiver and client may not completely agree about every detail of the care process. A solution to reduce discrepancies can be the engagement of clients in the early phases of service planning to manage expectations.

P.3 Engaging non-client stakeholders [Lit., Fig. 4.17-2.1, Appx 13]

Further to client engagement, health service research stresses the importance of engaging non-client stakeholders in the health service process (Schiller et al., 2013; Porter, 2010; Campbell et al., 2000; Blumenthal, 1996). This engagement forces purchasers to consider different perspectives and avoid or mitigate conflict derived from divergent expectations for health services. Moreover, since health service provision to a large extent depends on the integration of health stakeholders (Gröne and Garcia-Barbero, 2001), a collaboration between stakeholders increases the likelihood of achieving the performance goal. In medical services, collaboration is common through making multidisciplinary teams (MDTs) that includes clinicians with diverse specialities (e.g. Schofield and Amodeo, 1999). However, some researchers emphasise extending the stakeholder collaboration beyond MDTs and including other parties for effective health care planning (Tousijin, 2012; Leischow et al., 2008).

One manager (V2.GD4) also stressed ‘the community is a very important stakeholder, but it is not in the clinical MDT. Also, we will be moving to measure
community (peer) support mechanisms, not in MDT’. Collaboration should therefore encompass stakeholders from various areas who have an interest or influence in planning for CHS.

**P.4 Setting goals for delivery of each service [Lit., Fig. 4.17-3.3.2.7, Appx. 13]**

Setting goals for services is another key factor in planning for success. Service goals are required to specify the expected results of services, in terms of both individual and population health outcomes (Parsons et al., 2012). In managing Long-term Condition (LTC) services, goal-setting is considered to facilitate the measurement of changes made to the client’s health condition (Porterfield et al., 2015; Wilson et al., 2015; Wagner et al., 1996).

In this research, the importance of setting goals for service delivery emerged under two themes related to ‘Performance and Quality’. Those are conceptualised as ‘Goal-setting’ and ‘Compliance with needs and wants’ (3.3.2.7 and 3.3.2.8 in Figure 4.17).

**P.5 Cost-effectiveness of plans and subsequent goals [Lit. Fig. 4.17-3.4, Appx. 13]**

Cost-effectiveness needs the particular attention of purchasers. A comparison of service costs to results indicates whether investments and expenditures effectively produce the desired outcomes for the population (Whooley and Newcomer, 1989). Thus, cost-effectiveness connects financial accountability to performance accountability holding public health organisations responsible for the results of publicly funded services (Brinkerhoff, 2004). For CHS purchasers at DHBs, the cost-effectiveness of plans and subsequent goals can be indicated by the extent to which purchased services are able to elevate population health indexes.

### 5.3.1.5 PIs of Service Planning

In Service Planning, PIs are used to specify whether the performance of planning activities supports goal achievement (Allen et al., 2014; Bolton, 2003). A series of PIs are derived to reflect performance in each CSF of the service planning. To clarify how each PI has been defined, the source(s) are provided in brackets after the brief description. Each PI is either a determinant or result of performance and is classified according to the structure-process-outcome framework (Donabedian, 1966). For example, the first indicator (**P.1-PII**: the extent of using standardised...
needs assessment processes and tools) is a determinant of performance associated with the first CSF \((P.1):\) population-based needs assessment). It is also an indicator of process as it reflects how well service delivery is adjusted to the clients’ needs. Conversely, the second indicator \((P.1-PI2):\) the average health status score of clients assessed for a service) is a result as it shows the consequence of performance associated with the first CSF \((P.1)\). The third PI \((P.1-PI3):\) unmet needs of clients assessed for a service) is also a result because it indicates whether the performance associated with the first CSF \((P.1)\) was good enough to identify the client’s needs completely.

Insights from PIs can be used to drive improvements in planning activities in the next PDI cycle. Figure 5.2 shows the PIs of service planning assigned to each CSF. These are discussed next.

\textit{P.1-PIs: measuring the performance of population-based needs assessment}

The first set of PIs assesses the extent to which population needs assessment reflects clients’ service needs. Needs assessment is a critical part of the planning and provision of CHS, given limited resources (Lega et al., 2013; Shortell et al., 1998; Bazzoli et al., 1997).

The first indicator \((P.1-PI1)\) evaluates the extent of using standardised needs assessment processes and tools, the use of which can minimise bias in identifying needs \([\text{Lit.}]\). This PI indicates whether needs assessment is a structured process supported by tools such as InterRAI\(^41\) in HOP. The second indicator \((P.1-PI2)\) is the average health status score of clients assessed for a service \([\text{Lit.}]\). It measures the extent to which needs assessment reflects clients’ needs accurately. One way to measure health status gained from provided services is the average score of Health-related Quality of Life (HRQoL) for clients of a specific service (Smith et al., 1999).

The unmet needs of clients assessed for a service (Mpinga and Chastonay, 2011) is measured by \(P.1-PI3\) \([\text{Lit.}]\). It identifies shortcomings in the performance of needs assessment. However, unmet needs may be due to service failures occurring after successful needs assessment.

\(^{41}\) International Resident Assessment Instrument (InterRAI) is an international collaborative to improve the quality of life of vulnerable persons through a seamless comprehensive assessment system. Available at: \textcolor{blue}{\url{www.interrai.org}} [accessed 5 Jan. 16]
**P.2-PIs: measuring engagement of service clients (or patients)**

Measuring the engagement of clients in decision-making indicates whether plans are sufficiently patient-centered. Thus, the PIs addressing client engagement are built on the notion of patient-centred care (The U.S. Institute of Medicine, 2001).

The proportion of clinical decisions in which clients and their families were involved (Sepucha et al., 2008) is indicated by \( P_{.2-P11} \) [Lit.]. The second indicator \( P_{.2-P12} \) measures the proportion of care plans and clinical services that promote self-management [Lit.]. This indicator reflects the number of care plans which encompass patient education and empowerment (Lorig and Holman, 2003). These two PIs communicate the extent of opportunities created for clients to be involved in their own treatment, showing the prevalence of client engagement activities. The numbers provide a basis for comparison across years to understand whether engagement has increased or decreased.

The third indicator \( P_{.2-P13} \) measures the proportion of patient and families who participated in decision-making, by service type [ Lit.]. This item shows the extent to which efforts to engage clients (i.e. patient-centeredness) have been successful (Devine et al., 2013). However, it does not reveal the source of low participation, which may be due to patients’ reluctance to discuss their problems or spend time on attending sessions. Further evaluation might be needed to uncover the causes underlying low participation (Longtin et al., 2010).

The fourth indicator \( P_{.2-P14} \) is the participation rate of community or client representatives in decision-making [Appx. 13]. This indicator shows how well efforts to produce broader representation work. Although these representatives are non-client stakeholders, primarily advocating for clients’ rights, their engagement is classified as a PI of client engagement.

**P.3-PIs: measuring engagement of non-client stakeholders**

Chapter 4 posited that CHS stakeholders have different interests and influence in each service. This makes the coordination of planning activities a daunting task compared to delivery and administration, because of its commitment to satisfying their divergent criteria for various services with dissimilar goals (Bolland and Wilson, 1994b). For example, service planning must accommodate divergent
missions for mental health services and health of older people. Thus, measuring the engagement of non-client stakeholders is an important factor in successful planning. Four PIs are defined to gauge to what extent these stakeholders are engaged in the service planning stage.

The number of cross-functional partnerships (Tousijn, 2012) formed to handle planning activities cooperatively is indicated by \( P.3-PI1 \) [Lit., Appx. 13]. This number would indicate the level of cooperation between CHS stakeholders, within the health sector and across the public sector. It encompasses the number of communications such as committees, shared plans, consultations, and meeting minutes.

The next two PIs are used to evaluate the degree to which partnership initiatives have been successful. Thus, the proportion of planning decisions made by cross-functional partnerships (Tousijn, 2012) is evaluated by \( P.3-PI2 \) indicating the actual level of engagement [Lit., Fig. 4.17-2.2.1.3]. Another option is to analyse the list of attendees in meetings to assess the engagement level. The third indicator (\( P.3-PI3 \)) focuses on the results of actual partnerships by measuring the proportion of successful partnership plans [Appx. 13]. The success rate can be identified by, for instance, the percentage of shared plans which have been implemented.

The fourth PI (\( P.3-PI4 \)) assesses the satisfaction of involved stakeholders with decision-making processes (Halachmi, 2011), [Lit.]. Stakeholder satisfaction may measure the various aspects of cooperation such as the level of involvement, the results of shared plans, and adequacy of exchanged information by partners.

\[ P.4-PIs: \text{measuring the performance of setting goals for delivery of each service} \]

The value of goal setting for the delivery of CHS was noted. However, goals should be realistically devised given limited resources and clients’ expectations (Ganju, 2006).

The extent to which goals of a service are SMART (Doran, 1981) is indicated by \( P.4-PI1 \) [Lit., Fig. 4.17-3.3.2.7, Appx. 13]. This PI informs decision makers about achievability and measurability of goals considering the resource constraints imposed by budgets and time. The clarity of milestones set to obtain well-being (Wagner et al., 1996) is assessed by \( P.4-PI2 \) [Lit, Appx. 13]. Milestones split the service goal into manageable parts that simplify monitoring progress. An
advantage of setting milestones is the identification of controllable and uncontrollable factors in achieving the patient’s outcomes (Giuffrida et al., 1999).

The third PI (P.4-PI3) reflects the compliance of service goals with rules and regulations [Lit., Appx. 13]. The fourth indicator (P.4-PI4) determines the congruence of service goals with other aims and targets set for services (e.g. budget), [Lit., Appx. 13]. These PIs are built on the importance of setting ‘boundary controls’ to avoid conflicts of interest (Simons, 1995). For example, DHBs need to ensure that any new service agreement complies with rules and regulations detailed in the relevant laws or code of practices.

The percentage of service goals attained by individual providers delivering a specific service (Parsons et al., 2012) is measured by P.4-PI5 [Lit]. This measure indicates the level of goals attained for every client using a specific service. Although goal attainment belongs to the service delivery, purchasers use this information to assess the extent to which the achievement of service goals is set in plans.

P.5-PIs: measuring the cost-effectiveness of plans and subsequent goals

The last set of PIs is for measuring the effectiveness of allocated resources for providing services. Respondents emphasised the need to consider the investments in social services by other public organisations as their investments make them stakeholders of CHS as well. Thus, the first PI (P.5-PI1) is investment through other social entities, which is a determinant of public health performance [Lit., Appx. 13]. Murray and Frenk (2000) explain that intersectoral advocacy, including social services such as education promoting health status, sit at the boundaries of the health system but are not part of it. One manager (V2.GD4) stressed that ‘value for money is important, but resource is more important. We need to consider investment implications through other social entities and their impact on health service provision’.

Public organisations (e.g. DHBs) are commissioned to respond to population needs (Bolton, 2003). Smith et al. (2008) suggest that issues about public health services reported in the media can reflect how successful the responsible organisations are. Thus, the second PI (P.5-PI2) is the public image of a DHB in fulfilling its mission [Lit.]. For example, the number of adverse medical or drug
events reported in the national media in a certain period (e.g. annually) can reflect on the safety of the health system\textsuperscript{42}.

The variation in cost of treatment for a specific episode or condition (McLees et al., 2015; Lee and Nowell, 2014) is measured by $P.5-PI3$ \textit{[Lit.]}. For example, a variation in cost per client to treat asthma. However, further analysis may be needed to find the reasons for the cost variation. The fourth PI ($P.5-PI4$) is the realised value for money (VfM), \textit{[Lit., Appx. 13]}. It is a PI that augments measuring the effectiveness of planning performance. VfM is consistent with the call for an integrated accountability framework in the public health services and highlights the quest for quality services that match population needs and use public resources efficiently (Pollock et al., 2002; Boland and Fowler, 2000; Rouse and Putterill, 2000). However, one manager (V1.GD4) explained that VfM must be measured holistically and in relation to other aspects of public health such as: ‘(i) population profile, (ii) delivery of services (e.g. primary care, secondary, tertiary) (iii) intensity of need (e.g. Decile ratings)’. Thus there might be several measures used for VfM such as QoL or caseweighted volumes per $1,000$ of expenditure, or some combination of the NZ national health targets\textsuperscript{43} relative to expenditure.

Thus, VfM must consider the population needs, delivered services across all levels of care from primary to tertiary and intensity of needs as categorised by ranking systems such as decile ratings\textsuperscript{44}. However, this study found no evidence that decile ratings were used in public health. Rather, some community-based service providers used triage\textsuperscript{45} for referring clients to appropriate providers.

The five components of the service planning were discussed above. The next section explains the five components of the service delivery stage.

\textsuperscript{42} Torture reports: Health Boards respond. Available at: \url{http://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=11676620} [accessed 20 Jul. 16]


\textsuperscript{44} The Ministry of Education uses a decile rating (ranking) system for school funding purposes. Each decile contains approximately 10% of schools. Schools in decile 1 have the highest proportion of students from low socio-economic backgrounds. Schools in decile 10 have the lowest proportion of these students. Available at: \url{http://www.ero.govt.nz/Help/FAQs} [accessed 2 Jan. 16]

5.3.2 Stage 2: Service Delivery (D)

5.3.2.1 Focus of the stage
The performance of the service delivery also focuses on fulfilling client’s needs and wants. Figure 5.3 shows the five components of the service delivery stage.

5.3.2.2 Key stakeholders of service delivery
Key stakeholders in the second stage are respectively DHB, NGOs, Patient and family, and MOH but the order of rankings is different from the service planning stage. The rankings of other stakeholders in this stage are provided in Appendix 14.

5.3.2.3 Performance goal: ‘Equitably providing every single client with the best possible service’
The goal of service delivery is to equitably provide every single client with quality services given limited resources. Donabedian (1990) accentuated that one pillar of quality is the fairness of a health care system in serving the population. Likewise, one manager (V2.GD4) emphasised ‘equity of service is more important than the quality of service’.

5.3.2.4 CSFs for Service Delivery
Four CSFs in service delivery were identified. Purchasers need to monitor the performance in these four areas to ensure providers’ services comply with clients’ needs, the performance goal of the stage, and other criteria set in the service contract and standards. Figure 5.3 presents these CSFs.
**Stage 2: Service Delivery (D)**  
**Focus:** Client's needs and wants

**Goal:** Equitably providing every single client with the best possible service

<table>
<thead>
<tr>
<th>Critical Success Factors (CSF)</th>
<th>Performance Indicators (PIs)</th>
<th>Determinant</th>
<th>Result</th>
<th>Stage of service</th>
</tr>
</thead>
<tbody>
<tr>
<td>(D.1) Capacities of service provider</td>
<td>Provider's historical record of operating performance (i.e. cost, quality, and times taken) to complete delivery</td>
<td>X</td>
<td>Structure</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Compliance with standards (e.g. the results of accreditation and audit)</td>
<td>X</td>
<td>Structure</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Number of required improvements as identified during certification or audit (i.e. the number of non-compliances)</td>
<td>X</td>
<td>Structure</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Type and level of skills and qualifications of the provider's staff (i.e. caregivers and administrators)</td>
<td>X</td>
<td>Structure</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Capabilities of the provider's quality management system (e.g. the number of non-compliances in the assessment of the system)</td>
<td>X</td>
<td>Structure</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ability of the provider to synchronize the design and provision of services with the current needs and demand (e.g. number on waiting lists)</td>
<td>X</td>
<td>Structure</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Compliance with the service contract (i.e. the contractual audit report)</td>
<td>X</td>
<td>Structure</td>
<td></td>
</tr>
<tr>
<td>(D.2) Efficiency of service</td>
<td>Number of clients served</td>
<td>X</td>
<td>Process</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Proportion of clients that had completed their recommended services (i.e. treatments required based on the results of needs assessment)</td>
<td>X</td>
<td>Process</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Average client/patient serving cost (i.e. cost of delivery)</td>
<td>X</td>
<td>Process</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Average client/patient response time (i.e. time taken to complete delivery)</td>
<td>X</td>
<td>Process</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Average client/patient satisfaction score (i.e. service quality)</td>
<td>X</td>
<td>Process</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Unmet individual needs for a specific service (e.g. the audit report, client feedback, or complaints)</td>
<td>X</td>
<td>Process</td>
<td></td>
</tr>
<tr>
<td>(D.3) Quality of service</td>
<td>Proportion of clients/patients satisfied with a provider's delivery process (i.e. according to a specific patient satisfaction criteria)*</td>
<td>X</td>
<td>Process</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Result of the patient safety audit in health care facilities providing patient care (e.g. CRC and ARRC)</td>
<td>X</td>
<td>Process</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Participation of patients and families in decision-making about the delivery of the service</td>
<td>X</td>
<td>Process</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Proportion of result-based milestones achieved through the delivery of a service (e.g. economic sustainability or living independently)</td>
<td>X</td>
<td>Process</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Proportion of adverse events/effects (i.e. only those events which are the results of the provider's performance)</td>
<td>X</td>
<td>Process</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Number of new client/patients acquired and referred</td>
<td>X</td>
<td>Process</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Proportion of clients discharged from a service (e.g. home care services)</td>
<td>X</td>
<td>Process-Outcome</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Proportion of patients received right care in right place at right time (e.g. weighted average of the results for D.3-P11 to PI7)</td>
<td>X</td>
<td>Process-Outcome</td>
<td></td>
</tr>
<tr>
<td>(D.4) Effectiveness of service</td>
<td>Proportion of satisfied clients/patients after discharge from the service (e.g. post-discharge satisfaction score)</td>
<td>X</td>
<td>Outcome</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Proportion of health goals attained (i.e. goals set for delivery of a service and the results of needs assessment)</td>
<td>X</td>
<td>Outcome</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Generic health outcome score measured by HRQOL tools (e.g. functional health outcomes score)</td>
<td>X</td>
<td>Outcome</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Disease-specific outcome score (e.g. vascular diseases, diabetes or asthma)</td>
<td>X</td>
<td>Outcome</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Rate of client/patients retention</td>
<td>X</td>
<td>Outcome</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Rate of reduction in an illness presenting with a specific condition (e.g. vaccination effect)</td>
<td>X</td>
<td>Outcome</td>
<td></td>
</tr>
</tbody>
</table>

*E.g. physical condition of facilities, competency of providers' staff, communication, accessibility and convenience, acceptability, availability, equity.

Figure 5.3 Stage 2: Service Delivery (D)
D.1 Capacities of service provider [Lit., Fig. 4.17-3.3.6.2]

The first critical area is the provider’s ability and resources to deliver needed services. The facilities, service equipment, and staff are a few examples. This CSF outlines the importance of provider’s organisational characteristics that Donabedian (1966) classified as ‘structure’.

Service marketing scholars (e.g. Lusch and Vargo, 2006; Parasuraman et al., 1988; Grönroos, 1984) contend that the client assesses the quality of services provided by staff and physical facilities. In the delivery of health services, staff implies the non-clinical staff (administrators) and clinical staff (caregivers) who interact directly with clients. Physical facilities are the service environment and equipment used to serve clients. Also, the management of the organisation is important since it utilises staff and facilities to provide services (Seth et al., 2005).

Despite being aware of their advantages, the NGOs that participated do not have performance management or measurement systems. As NGO4 responded:

*We don’t actually measure our performance. We do the work, but we don’t say how effective it is, so we don’t have a KPI to say for example 88% of prescriptions were picked up on time, or 12% of LTC patients were getting to be called*

NGO6 also stated that ‘we did staff performance measurement this year as per the DHB requirements, but we don’t have a formal internal performance measurement system.’

Like service planning, the ability of service providers to deliver quality services is restricted by available resources that can be used to serve clients and fulfil the accountability mandates (Hasenfeld, 2015). Dean and Kiu (2002) also provide empirical evidence that although contractors acknowledged the role of internal performance measurement in service quality, they first consider whether the benefits of contracting outweigh the costs of measurement activities.

This concern of contractors causes a conflict between the mission of health service providers, to improve the life of clients, and the benefits to contractors from public contracts. Hasenfeld (2015) argues that accountability requirements mandated by funders decrease the providers’ financial resources that could have been used for improving the services. The scarcity of resources suggests providers
need additional support, mainly from funders, to build the organisational capacities that can be used to improve the quality of services (Hasenfeld, 2015; Carnochan et al., 2014; Liket et al., 2014; Tenbensel et al., 2014). Public funders can help providers by simplifying accountability requirements thus enabling contractors to allocate their resources to cover the costs of performance management and enhance various aspects of performance. Similarly, NGO5 commented: ‘reimbursement procedure needs to be simplified to make the whole process flow, then customers will get service easier and faster, and pharmacies will get their own money quicker, and they can keep their business sustainable’.

D.2 Efficiency of service [Lit., Fig. 4.17-3.3, Appx. 13]

Service efficiency indicates how well the resources (as input) are used to serve the clients (as output) and is traditionally associated with the providers’ performance (Martin, 2005a). That is, efficiency shows the ability of service providers to reduce service costs without reducing quality.

However, views on what constitutes the efficiency of health services are diverse. For service contracting, efficiency is measured by outputs, illustrating number and volumes. In health care research efficiency is typically considered as a component of health service quality (Donabedian, 1990).

Regarding the efficiency of CHS, some respondents declared that relying only on the number of clients served, as Lee and Nowell (2014) suggest, would not clearly indicate efficiency. In GD4, managers indicated the extent to which efficiency must be measured. One manager (V3.GD4) stressed that it is ‘better to measure the percentage completed [treatment] as efficiency rather than volumes’. Similarly, another manager (V4.GD4) exemplified efficiency measurement as an ‘increase in inoculation rates…or a decrease in an illness presenting with specific conditions’.

The expressed views on the association between efficiency and the results of service accord with the notion that assessment of providers’ performance must connect expenditures to results (Ramanathan, 1985). In New Zealand public health, service contracting is starting to include results when measuring the providers’ performance. This is not without difficulty as pointed out by M4.D2:
We’re still in the early stages of working up outcomes. At the moment, we’re working around employment and housing. We’re mental health, we can’t say your leg was repaired and you’re able to work at a hospital. We don’t do that and there’s very little research that uses quality adjusted life years or disability adjusted life years in mental health. Even though we’ve got a health economist now, they’re too busy tied up on the medical side of services. So that’s a hard question to ask, where often we are counting inputs and outputs. We’re not looking at outcomes, which is a significant handicap we’re trying to work through.

In summary, service purchasers tend to evaluate service efficiency by results which means the Donabedian’s definition of quality of health services is preferable to other definitions.

D.3 Quality of service [Lit., Fig. 4.17- 3.2, 1.1.3.4, Appx. 13]

Berwick (2009) argues that, in patient-centred care, the client is the sole judge of the quality of health services. This study also found support for the notion of patient-centeredness in which client’s needs and wants determine the quality of CHS. M1.D1 emphasised that they need to know more about the quality of services to determine whether they meet clients’ expectations. DHBs give providers contracts, but they are relatively uncertain about what is happening between patient and provider.

While service quality indicates the ability of a provider to fulfil the client’s needs, it is also imperative for CHS providers to consider the client’s condition throughout the continuum of care, implying the need for a system-wide approach to measuring the quality of health (Anderson et al., 2003). As M2.D3 commented:

So I’m a diabetes nurse specialist, I’ll only look at diabetes. But if I see that they’ve got no insulation in their house, then actually I’d do something about that and make some referrals. So, kind of thinking across the whole system rather than with your blinkered perspective.

The above statement to some extent implies the need for an integrated design of the health care system that aims to enhance health services along the continuum of service process via better communication among stakeholders, highly accessible service and information, and strong management in different phases of service (Suter et al., 2009).
Integrated performance measurement systems are broadly designed to measure multiple dimensions of performance in order to improve it (Chenhall, 2005; Kennerley and Neely, 2003; Rouse and Putterill, 2003; Bititci et al., 1997). Integrated health care systems aim to improve the quality of health services by coordinating the multiple dimensions of the service process. However, what distinguishes performance measurement in integrated health care is the focus on the client’s needs. This means that in the health system, everyone’s performance is measured against the fulfilled needs of clients.

As reported in Chapter 4, there is a general agreement that the client is the focal unit of measuring health system performance. Also, quality is a critical dimension of performance which is measured by the client’s satisfaction and experience with the service (Bauld et al., 2000; Sitzia and Wood, 1997; Pascoe, 1983).

Equity is an additional aspect of quality that shows the fairness of a health system in serving different groups (The U.S. Institute of Medicine, 2001; Donabedian, 1990). Equity of services was mentioned as an indicator of providers’ performance. As M4.D1 pointed out, equity of service is another dimension of performance because it should be ‘open to everyone’.

D.4 Effectiveness of service [Lit., Fig. 4.17-3.4, 1.1.3.5, Appx. 13]

Service effectiveness relates to the results achieved by the service (Donabedian, 1990). Similar to service efficiency, the service contracting literature (Martin and Kettner, 2009) draws a distinction between quality and outcomes. In contrast, Campbell et al. (2000) provide compelling evidence that quality and outcome of services are inseparable. As a result, any performance management tool created in the health sector needs to consider clients’ outcomes when measuring service quality (e.g. Parameswaran et al., 2014; Blumenthal, 1996; Hunt et al., 1985; Gilson et al., 1975).

The findings of this study show that service outcomes are imperative to DHBs and NGOs when they evaluate the effectiveness of provided services. M5.D2 explained the importance:

There are certain interventions like we say, we have some contracts where we say we want to have X number of patients, diabetic patients should receive self-management education for managing their own condition. But that’s a very small proportion of the diabetic patients, so you’re not providing to
everybody. And then if I say, okay, so you have had these people receiving the self-management education, but we’re really not monitoring whether the self-management education made any difference to their condition. We have not measured the outcome, have we? So that is a next step in the evaluation itself.

Data from multiple sources reveals that despite the difference of views about what constitutes performance, service outcome is the key indicator of effectiveness.

In particular, the evidence found in the NGO open day shows a common view on the indicators of service outcomes. Figure 4.16, demonstrates that quality is measured as the extent to which client’s needs and wants are satisfied.

5.3.2.5 PIs of Service Delivery

Four sets of PIs are developed to measure performance in the key areas of service delivery (Figure 5.3). Akin to service planning, each PI is either a determinant or result of performance and is classified according to the structure-process-outcome framework (Donabedian, 1966). In contrast to the Donabedian framework, the three stages of the delivery process are confined to the contract’s timeline which is often on an annual term. Thus, the structural PIs measure the abilities of the contractor before awarding a contract. The process PIs measure the delivery activities performed during the contract term, and the outcome PIs concentrate on the results of services.

As an example, for the first CSF (D.1: Capacities of service provider), the first six PIs46 are determinants of quality services and measures of structure as they indicate the providers’ organisational characteristics. The last PI (D.1-PI7: Compliance with the service contract), however, is a process measure reflecting whether the providers’ performance complies with the expectations set in the service contract.

However, service delivery often needs to continue beyond a contract’s timeline particularly in LTC services (Shaw et al., 2013; Nolte and McKee, 2008). The continuation of service delivery necessitates measuring service outcomes at

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46 D.1-PI1: Provider's historical record of operating performance to complete delivery
D.1-PI2: Compliance with standards
D.1-PI3: Number of required improvements as identified during certification or audit
D.1-PI4: Type and level of skills and qualifications of the provider’s staff
D.1-PI5: Capabilities of the provider’s quality management system
D.1-PI6: Ability of the provider to synchronise the design and provision of services with the current needs and demand
different intervals. The United Way of America (García-Iriarte et al., 2011) postulates that outcomes emerge incrementally in the short-term, intermediate, and long-term which extends measurement beyond the contract’s timeline. As Porterfield et al. (2015) argue, this finer classification of outcomes implies Donabedian’s framework needs to be extended into a structure-process-output form that is linked to indicators at short-term, intermediate, and long-term outcomes.

Nonetheless, this study assumes that measuring the performance of providers is done within the contract’s time frame. However, it is likely that measuring outcomes may usefully extend beyond the contract expiry date, particularly in LTCs. Hence, the PIs are tailored to measure delivered services against the clients’ needs and wants while taking contract requirements (e.g. time frame) into account.

Many of the measures for the following indicators are provided by the intermediate processes (i.e. interim feedback) depicted in Figure 5.1 (e.g. client feedback and audits).

**D.1-PIs: measuring the capacities of service provider**

The first set of PIs concentrates on the capacities of the service provider, determining the degree to which providers are capable of providing quality services. Apart from the last PI, the determinants assess the ability of the providers’ organisational structure to provide services. The first PI (**D.1-PI1**) is the provider’s historical record of operating performance in the delivery of a service [*Lit.*]. As Lee and Nowell (2014) propose, this record of performance could include cost, quality, and the time taken to complete delivery.

The second indicator (**D.1-PI2**) measures compliance with standards [*Lit., Fig. 4.17-3.5, Appx. 13*]. The compliance of providers can be measured against quality standards defined for functional (i.e. staff) and physical (i.e. facility) quality (Grönroos, 1984). Accreditation and Audit are two principal methods to ensure that providers’ quality conforms to standards. The former confirms that the requisite conditions are present, and the latter evaluates whether delivery processes comply with standards.

Findings on the role of contractual audits in improving performance are contradictory. For example, Saario and Raitakari (2010) found evidence in mental health of a positive impact of contractual auditing on staff performance whereas
LeRoux and Wright (2010) observed that external audits in community health services have the smallest impact on strategic decision-making. In this study, both participants and respondents raised doubts about the role of auditing to assure service quality. One manager (V3.GD4) commented: ‘[it] depends on what type of audit. A provider can be fantastic in meeting patients’ needs and still fail in audit measures’. One manager (V4.GD4) believed that capacity is ‘good performance against the breadth of contract. Yes, we need accreditation plus audit results, but that may just mean we have great administration’.

The documentary analysis revealed that auditing is highly regarded by authorities, at least in home care services. Therefore, the second PI addresses compliance with standards (a determinant), being a criterion of providers’ capacities to provide quality services instead of a service quality indicator.

The number of required improvements as identified during certification or audit is measured by $D.1-PI3$ [Appx. 13]. Reductions in ‘non-compliances’ can be proxied by the number of improvements suggested in the quality audit reports47 (i.e. the fewer the better). Two examples of required improvements could be the need to improve the recording of procedures and processes or provide public information for patient’s rights and service information. This number would normally appear as a result of accreditation or audit. One manager (V4.GD4) suggested considering ‘accreditation, certification, and the number of continuous improvements attained during certification’.

Although this suggestion was proposed as an indicator of quality, it is classified under this CSF ($D.1$) since it better indicates the competency of a provider to provide quality services.

The fourth PI ($D.1-PI4$) evaluates the type and level of skills and qualifications held by the provider’s staff, including caregivers and administrators [Lit., Fig. 4.17-3.3.5.3]. The importance of service staff in providing quality services is accentuated in various research areas, namely service marketing (e.g. Seth et al., 2005; Parasuraman et al., 1988; Grönroos, 1984) and quality of health care services (e.g. Carryer et al., 2014; Carnochan et al., 2014; Aarons et al., 2009).

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The capabilities of the provider’s quality management system (Dean and Kiu, 2002) is indicated by $D.1\text{-PI}15$ [Lit.]. The data required for this PI can be found in the results from audits of the provider’s internal quality management system (e.g., the number of non-compliances in the assessment of the system). This indicator assesses, firstly, the extent to which the quality assurance system used by a provider organisation is structured and, secondly, the type of performance information the system provides. This PI relates to calls to CHS providers to strengthen their managerial systems to improve their service quality and outcomes (Benjamin, 2013; Garcia-Iriarte et al., 2011; Carman, 2007).

The sixth PI ($D.1\text{-PI}16$) is the ability of the provider to synchronise the design and provision of services with current needs and demand [Appx. 13]. This ability of providers can be measured by, for example, the length of delays in serving a client or number on waiting lists. This PI draws on the suggestion of one manager (V1.GD4) that ‘the capability of providers is recognisable by their ability to match service to current demand areas as agreed by funders which means adjusting the delivery to users’ needs’.

Again, this indicator measures the capability of service providers to adjust service provision to changed needs or demand, for which they require an agile process management system. However, as discussed earlier, employing such systems depends on the costs to providers.

$D.1\text{-PI}17$ [Lit., Appx. 13] measures the compliance of provider’s performance with the contract (Saario and Raitakari, 2010). This is measured by the feedback to DHB service managers from audit reports. As quoted before, one of the validators suggested that ‘good performance against the breadth of contract’ be measured instead of accreditation for assessing the capabilities of a provider.

$D.2\text{-PI}1s$: measuring the efficiency of service

Assessing the efficiency of service is encapsulated in output measures, representing the volume of provided services in connection with the results, time, and cost of the process (Brinkerhoff, 2004). In the respondents’ view, as discussed earlier, efficiency must be measured with respect to the results of the service.

The number of clients served by a provider, which is commonly used to measure the output (e.g. Lee and Nowell, 2014), is indicated by $D.2\text{-PI}11$ [Lit.]. However, the
respondents preferred the percentage of clients that had completed the service instead of the number of recipients. Hence, the second PI (\(D.2-PI2\)) measures the proportion of clients that had completed their recommended services based on the results of needs assessment [Appx. 13]. However, since measuring the completion level in LTC services (e.g. home care or diabetes) is not that straightforward, an alternative measure is the proportion of clients who attained a certain percentage of service goals, or milestones, within a specific period (Baker et al., 2001). For example, the proportion of older clients served by a provider who are able to prepare their meal independently\(^{48}\) within two months after service commencement.

Three indicators \(D.2-PI3\) [Lit.], \(D.2-PI4\) [Lit.], and \(D.2-PI5\) [Lit] gauge the operating performance of the delivery process. They are service cost, time taken to complete delivery, and quality of delivery process. Operational measures are extensively proposed by the performance measurement scholars (e.g. Neely et al., 2005; Chenhall, 2005; Fitzgerald et al., 1991) and health service researchers (e.g. McLees et al., 2015; Lee and Nowell, 2014; Murray and Frenk, 2000).

The sixth indicator (\(D.2-PI6\)) is unmet individual needs for a specific service [Lit.]. This PI indicates whether the service has sufficiently responded to the assessed needs of a client. This measure could be obtained from the audit report, client feedback, or complaints. Mpinga and Chastonay (2011) discerned that an unmet need for a health service is a factor contributing to patient dissatisfaction. Therefore, unmet needs for services can indicate inefficiency of provider performance. Nonetheless, this measure must be accompanied by a thorough evaluation to explore the causes underlying the shortcomings (Wholey et al., 2010; Rossi et al., 2004).

\[D.3-PIs: \text{measuring the quality of service}\]

Measuring the quality of services centres on the notion of patient-centeredness, for which a set of PIs are tailored to measure the client’s experience with a service (Stewart, 2001).

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The first PI (D.3-PI1) reflects the proportion of clients satisfied with a provider’s performance in delivering the service (i.e. according to specific patient satisfaction criteria49), [Lit., Fig. 4.17-3.3.2.1]. This indicator is mainly grounded in the findings from the NGO open day where the providers pointed out ‘client feedback’ as the primary indicator of the quality of service delivery and outcomes. Consistently, health service researchers consider patient satisfaction a key indicator of service quality at process and outcome levels as well as an identifier of necessary improvements (Mpinga and Chastonay, 2011; Gill and White, 2009; Bauld et al., 2000; Sitzia and Wood, 1997; Williams, 1994; Pascoe, 1983).

Despite the significance of client feedback for the providers, the service purchasers expressed concern that client satisfaction cannot sufficiently reflect the quality of service. One manager (V5.GD4) suggested that ‘quality is also measured by the number of audited patient days, if the service relates to patient care’.

Consequently, The second indicator (D.3-PI2) is the result of the patient safety audit in health care facilities providing patient care services [Appx. 13, Lit]. The purpose of the patient safety audit is to improve patient care through the detection of gaps in performance and service quality (Ursprung et al., 2005). The authors reported that real-time patient safety audits can detect a range of clinical errors during caregiving. Thus, the number of patient days50 that have been audited together with the audit result effectively measures the quality of services in community residential care (CRC) and age-related residential care (ARRC) facilities.

The participation of patients and families in decision-making about the delivery of the service (Richards et al., 2015; Berwick, 2009; The U.S. Institute of Medicine, 2001) is assessed by D.3-PI3 [Lit., Fig. 4.17-3.3.2.5]. CPS managers stressed that involving and educating clients indicate service quality. For example, M1.D3 commented

49 For example physical condition of facilities, competency of providers' staff, communication, accessibility and convenience, acceptability, availability, equity.

50 A unit in a system of accounting used by health care facilities and health care planners. Each day represents a unit of time during which the services of the institution or facility are used by a patient; thus 50 patients in a hospital for 1 day would represent 50 patient days. Available: http://medical-dictionary.thefreedictionary.com/patient+day [accessed 21 Feb. 16]
What separates a bad pharmacist from a good pharmacist is how he/she gives proper information to the patients and builds and maintains a good relationship with them about the expected outcomes of the medication and educates them on how to use the medications according to the regimen. So it’s generally about they must know about the patients and the fact that what affects them.

Nevertheless, measuring client involvement in service delivery is an onerous process. The first reason is the lack of data for indicating how well clients are informed of caregiving decisions and to what extent the decisions meet clients’ preferences (Sepucha et al., 2008). Secondly, there is a lack of evidence on the impact of client involvement in preventing adverse events (Longtin et al., 2010). As a solution, an appropriate level of patient involvement may best be reflected in the client satisfaction score. Thus, elements indicating the level of involvement should be incorporated in measurement tools such as client satisfaction surveys. For example, clients could be asked how satisfied they are with information provided before starting delivery.

As highlighted in service planning, each service needs to target a certain goal for delivery activities. Thus, the proportion of result-based milestones achieved through the delivery of a service (Glasgow et al., 2005; Baker et al., 2001) is measured by D.3-PI4 [Lit., Fig. 4.17-3.3.2.7]. This PI paves the way to accomplishing the goal of the service by reflecting what is further required to be done for the client. The proportion of adverse events or effects occurring, indicating the safety of clients during the delivery process (The U.S. Institute of Medicine, 2001), is indicated by D.3-PI5 [Lit., Fig. 4.17-3.3.2.3]. Additionally, as Longtin et al. (2010) state, a root-cause analysis is needed to identify the underlying reasons for an untoward occurrence, determining whether it arises from a caregiver error or is due to uncontrollable factors (Giuffrida et al., 1999).

The sixth PI (D.3-PI6) considers the number of new clients acquired and referred by other health service providers (e.g. General Practitioners – GPs), [Lit.]. Although Lee and Nowell (2014) consider new client acquisition as a measure of service outcome, NGO9 stated that ‘the increase in the number of referrals from GPs also shows the quality of our work’.

51 See Appendix 8, item 5 under 6: ‘Drug safety; minimum Adverse Drug Reaction (ADR)’.
This opinion to some extent reflects Grönroos (1984) comment about his service quality model that new customer acquisition correlates with the provider’s reputation for quality.

The seventh indicator \((D.3-PI7)\) is the proportion of clients discharged from a service \([Lit.]\). This PI indicates the degree to which a service, such as home care, has been successful in returning independence to the client (Parsons et al., 2012; Baker et al., 2001). Likewise, in the NGO open day, some of the providers working in home care and dementia regarded the independence of clients as an outcome measure.

The proportion of patients receiving the right care in the right place at the right time is evaluated by \(D.3-PI8\) \([Lit.]\). This PI reflects the ultimate aim of CQI methods in health services (Shortell et al., 1998). The eighth indicator is a summary of the other PIs, outlining the overall quality of services provided in terms of desired outcomes, satisfied clients, and on-time delivery. Thus, a weighted average of the results for the other indicators \((D.3-PII to PI7)\) could be obtained using various methods.\(^{52}\)

**D.4-PIs: measuring the effectiveness of service**

The last criteria in this stage of service delivery focuses on measuring the results of services and corresponds to an outcomes-based approach in public sector performance management (e.g. Friedman, 2009; Heinrich, 2002; Wandersman et al., 2000).

The first PI \((D.4-PIII)\) measures the proportion of satisfied clients after discharge from the service \([Lit., Fig. 4.17-3.3.2.1]\). This PI thus concentrates on the client’s experience with the service and provides insight into how satisfied overall the clients were with their treatment (Sitzia and Wood, 1997). As explained in Chapter 4, some of the NGOs’ indicators embody the experience of clients including, for example, independence level, socialisation activity, health status, and success stories.

\(^{52}\) A simple method is provided by Lee (1992) who uses a combination of ordinal scales from 1 to 10 and user specified weights. (Lee, J. Y. 1992. How to make financial and nonfinancial data add up. *Journal of Accountancy*, 174, 62.)
The second indicator (D.4-PI2) measures the proportion of health goals attained via delivery of service [Lit., Fig. 4.17-3.3.2.7]. The measurement considers the goals set in the planning stage for the service delivery. That is, it reflects the proportion of health goals indicated by the needs assessment and subsequently attained by the end of the delivery cycle. However, this measure cannot be regarded in isolation because there may be other variables disrupting goal attainment, over which the provider has no control (Behn, 2003; Giuffrida et al., 1999; Donabedian, 1966).

Considering that CHS covers a wide range of health services, special measures are required to separately assess generic health and disease-specific outcomes. Patrick and Deyo (1989) distinguish between these two types of measures. Therefore, the third PI (D.4-PI3) is a generic health outcome score (often measured by HRQoL) indicating the functional health of the client [Lit. Fig. 4.17-3.3.4.1]. The fourth indicator (D.4-PI4) measures the disease-specific outcome score for a client from a specific service such as vascular patients, diabetes, or asthmatic. Asthma Quality of Life Questionnaire53 is an example of this group [Lit. Fig. 4.17-3.3.4.1].

Distinguishing these two PIs to some extent resembles setting common versus unique measures to assess various dimensions of performance (Lipe and Salterio, 2000). Making distinctions between PIs of service outcomes is also consistent with the notion of different purposes requiring different measures (Behn, 2003; Fitzgerald et al., 1991). The generic measures help to understand the overall effect of a service on the client well-being while disease-specific measures are needed to assess the outcomes of a specific service on a specific health condition such as a vascular disease (Patrick and Deyo, 1989).

The fifth PI (D.4-PI5) is the rate of client retention that reflects the ability of the provider to satisfy the client needs and wants [Lit., 4.17-3.3.2.1]. In service marketing, the rate of client retention is attributed to customer loyalty that implicitly shows client satisfaction with service quality (Seth et al., 2005). For measuring the performance of CHS providers, Lee and Nowell (2014) classify the client retention rate as an outcome measure that indicates the extent to which the provider fulfilled

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the needs and wants of the targeted population. However, client retention in health sector must not be misunderstood as wanting patients to stay, for example in hospital. Instead it means that if in the future they need the service, they would prefer to return to the same service provider.

The sixth indicator \((D.4-P16)\) measures the rate of reduction in an illness presenting with a specific condition \([\text{Lit., Appx. 13}]\). Although one manager (V4.GD4) suggested this indicator initially for measuring service efficiency, the preventive effect of health services is usually regarded as an outcome indicator (Blumenthal and McGinnis, 2015). Thus, this study assumes that reduction of illness or disability is evidence of service effectiveness (Donabedian, 2002).

The following section discusses the components of the service improvement stage.

### 5.3.3 Stage 3: Service Improvement (I)

#### 5.3.3.1 Focus of the stage

The performance of the service improvement also focuses on client’s needs and wants. This means efforts to improve services must enhance the client experience. Figure 5.3 shows the five components of the service improvement stage.

#### 5.3.3.2 Key stakeholders of service improvement

Key stakeholders in the third stage are respectively DHB, NGOs, MOH, and patient and family. In this stage, stakeholders are ranked differently from the previous stages. The rankings of other stakeholders in this stage are provided in Appendix 14. As an example, IT Health Board is ranked higher in the service improvement stage due to its role in developing health information systems.

#### 5.3.3.3 Performance goal: ‘Enhancing service efficiency, quality, and effectiveness for clients and other stakeholders’

For improving the performance of providers, this stage is concerned with the goal of enhancing the efficiency, quality, and effectiveness of services both in delivery and planning with respect to clients’ needs, and in the wants and interests of other stakeholders (McLees et al., 2015; VanLare and Conway, 2012).

Equally important, service improvement needs to consider the interests and influences of health service stakeholders which, as Porter (2010) contends, are not necessarily convergent. As discussed in Chapter 4, this research realised that it is necessary to keep a balance between patient satisfaction versus providers’
profitability or between high-quality services (expected by clients) versus budget constraints (imposed on funders).

5.3.3.4 CSFs for Service Improvement

Client’s needs and wants are still the focus of performance in the third stage. Seven CSFs in service improvement were identified and are listed in Figure 5.4. The CSFs are divided into three tiers.

The first tier (CSFs: I.1, I.2, I.3) assesses the enhancements achieved in the performance of service delivery in terms of efficiency, quality, and effectiveness of service. Thus, it indicates the extent to which performance in service delivery has improved. Measuring improvement can be effected by comparing the current results with, for example, previous year(s), other DHBs or service providers, or international benchmarks if available.

The second tier (CSF: I.4) is recognition of those high-performers highlighting a critical area of the service improvement stage. The importance lies in incentivising high-performers to continue their high performance as well as motivating low performers to take remedial actions to improve their performance.

The last tier (CSFs: I.5, I.6, I.7) is the development of processes and systems required to improve performance in the next purchasing cycle (PDI). The specific processes and systems identified are service and health information systems, self-management of clients, and providers’ capacities for delivering better services.
Figure 5.4 Stage 3: Service Improvement (I)

**Goal:** Enhancing service efficiency, quality, and effectiveness for clients and other stakeholders

<table>
<thead>
<tr>
<th>Critical Success Factors (CSFs)</th>
<th>Determinant</th>
<th>Outcome</th>
<th>Stage of service</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance Indicators (PIs)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.1 Enhanced efficiency of service</td>
<td>1.1-P1</td>
<td>X</td>
<td>Process</td>
</tr>
<tr>
<td></td>
<td>1.1-P2</td>
<td>X</td>
<td>Process</td>
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<td></td>
<td>1.1-P3</td>
<td>X</td>
<td>Process</td>
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<td></td>
<td>1.1-P4</td>
<td>X</td>
<td>Process</td>
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<tr>
<td></td>
<td>1.1-P5</td>
<td>X</td>
<td>Process</td>
</tr>
<tr>
<td>Tier 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.1-P1 - Time served to complete the delivery of a specific service</td>
<td>X</td>
<td>Process</td>
<td></td>
</tr>
<tr>
<td>1.1-P2 - Costs served to complete the delivery of a specific service</td>
<td>X</td>
<td>Process</td>
<td></td>
</tr>
<tr>
<td>1.1-P3 - Change in days until the next available appointment with a caregiver</td>
<td>X</td>
<td>Process</td>
<td></td>
</tr>
<tr>
<td>1.1-P4 - Change in number of steps to complete a specific service</td>
<td>X</td>
<td>Process</td>
<td></td>
</tr>
<tr>
<td>1.1-P5 - Costs avoided due to changes in delivery of a specific service</td>
<td>X</td>
<td>Process</td>
<td></td>
</tr>
<tr>
<td>Tier 2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.1-P1 - Change in cost per client for each specific type of CHR (e.g., cost per older client with non-complex needs using home care services)</td>
<td>X</td>
<td>Process</td>
<td></td>
</tr>
<tr>
<td>1.2 Enhanced quality of service</td>
<td>1.2-P1</td>
<td>X</td>
<td>Process</td>
</tr>
<tr>
<td></td>
<td>1.2-P2</td>
<td>X</td>
<td>Process</td>
</tr>
<tr>
<td></td>
<td>1.2-P3</td>
<td>X</td>
<td>Process</td>
</tr>
<tr>
<td>Tier 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.2-P1 - Change in the proportion of clients satisfied with the delivery of a specific provider (i.e., based on patient satisfaction criteria)</td>
<td>X</td>
<td>Process</td>
<td></td>
</tr>
<tr>
<td>1.2-P2 - Number of adjustments/amendments made to match the service specifications with the client's needs</td>
<td>X</td>
<td>Process</td>
<td></td>
</tr>
<tr>
<td>1.2-P3 - Change in the number of adverse events (e.g., reduction in incidents relating to clinical conditions)</td>
<td>X</td>
<td>Process</td>
<td></td>
</tr>
<tr>
<td>1.2-P4 - Change in the number of reported occupational incidents occurring to health workers (e.g., work-related injuries, illnesses, etc.)</td>
<td>X</td>
<td>Process</td>
<td></td>
</tr>
<tr>
<td>1.2-P5 - State of improvement in the knowledge and skills of health workers (e.g., the proportion of CHWs** completed training)</td>
<td>X</td>
<td>Process</td>
<td></td>
</tr>
<tr>
<td>1.2-P6 - State of improvement in equity known as deprivation and social exclusion for different subpopulations (e.g., the number of social development plans)</td>
<td>X</td>
<td>Process</td>
<td></td>
</tr>
<tr>
<td>Tier 2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.3 Enhanced effectiveness of service</td>
<td>1.3-P1</td>
<td>X</td>
<td>Outcome</td>
</tr>
<tr>
<td></td>
<td>1.3-P2</td>
<td>X</td>
<td>Outcome</td>
</tr>
<tr>
<td></td>
<td>1.3-P3</td>
<td>X</td>
<td>Outcome</td>
</tr>
<tr>
<td></td>
<td>1.3-P4</td>
<td>X</td>
<td>Outcome</td>
</tr>
<tr>
<td>Tier 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.3-P1 - Improved individual health or life condition score (e.g., health status, economic condition, and client social condition)</td>
<td>X</td>
<td>Outcome</td>
<td></td>
</tr>
<tr>
<td>1.3-P2 - Modified behaviour or attitude score (e.g., reduction in the occurrence of bad behaviours)</td>
<td>X</td>
<td>Outcome</td>
<td></td>
</tr>
<tr>
<td>1.3-P3 - Change in the rate of readmission to the service or hospital (e.g., when it is the consequence of service failure)</td>
<td>X</td>
<td>Outcome</td>
<td></td>
</tr>
<tr>
<td>1.3-P4 - Change in the percentage of the target population that has been offered, retained, and completed a specific service (i.e., improved access)</td>
<td>X</td>
<td>Outcome</td>
<td></td>
</tr>
<tr>
<td>1.3-P5 - Change in the rate of incidence or prevalence of a disease or condition in the target population (i.e., relevant to prevention and educational activities)</td>
<td>X</td>
<td>Outcome</td>
<td></td>
</tr>
<tr>
<td>1.3-P6 - Improved health status or wellbeing of clients using a specific CHR (e.g., the average QOL score of clients using an LTC service vs. INQL** in HHUP services)</td>
<td>X</td>
<td>Outcome</td>
<td></td>
</tr>
<tr>
<td>Tier 2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.4 Recognition of high-performers</td>
<td>1.4-P1</td>
<td>X</td>
<td>Process</td>
</tr>
<tr>
<td></td>
<td>1.4-P2</td>
<td>X</td>
<td>Process</td>
</tr>
<tr>
<td>Tier 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.4-P1 - Overall clients' satisfaction and experience score that a provider obtains (e.g., satisfaction, admiration, and complaints)</td>
<td>X</td>
<td>Process</td>
<td></td>
</tr>
<tr>
<td>1.4-P2 - Overall clients' functional health outcomes score a provider obtains (e.g., measure by HRQoL tools)</td>
<td>X</td>
<td>Process</td>
<td></td>
</tr>
<tr>
<td>1.4-P3 - Improvement rate of HRQoL obtained by a provider (e.g., an overall appraisal of enhancements in the above CSFs; 1.1-1.3) compared to specific benchmarks</td>
<td>X</td>
<td>Process</td>
<td></td>
</tr>
<tr>
<td>1.4-P4 - Regularity of positive and constructive feedback to motivate high-performers and encourage low-performers (e.g., the number of formal communications within a year that DHUs established to inform NGOs about their performance and its results)</td>
<td>X</td>
<td>Process</td>
<td></td>
</tr>
<tr>
<td>Tier 3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.5 Development of service and health information systems</td>
<td>1.5-P1</td>
<td>X</td>
<td>Process-Outcome</td>
</tr>
<tr>
<td></td>
<td>1.5-P2</td>
<td>X</td>
<td>Process-Outcome</td>
</tr>
<tr>
<td></td>
<td>1.5-P3</td>
<td>X</td>
<td>Process-Outcome</td>
</tr>
<tr>
<td></td>
<td>1.5-P4</td>
<td>X</td>
<td>Process-Outcome</td>
</tr>
<tr>
<td></td>
<td>1.5-P5</td>
<td>X</td>
<td>Process-Outcome</td>
</tr>
<tr>
<td>Tier 2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.5-P1 - Number of NGOs, providing a specific service (e.g., home care providers), enrolled in new service initiatives established by DHs</td>
<td>X</td>
<td>Process-Outcome</td>
<td></td>
</tr>
<tr>
<td>1.5-P2 - Number of submissions to innovation awards (e.g., submissions to New Zealand Health Innovation Hub)</td>
<td>X</td>
<td>Process-Outcome</td>
<td></td>
</tr>
<tr>
<td>1.5-P3 - Novelty of innovative ideas (e.g., previous existence of an idea in the same area)</td>
<td>X</td>
<td>Process-Outcome</td>
<td></td>
</tr>
<tr>
<td>1.5-P4 - Calculated risk of implementing the new ideas (e.g., conducting a pilot study by the PDSA cycle to identify risks associated to full implementation)</td>
<td>X</td>
<td>Process-Outcome</td>
<td></td>
</tr>
<tr>
<td>1.5-P5 - Rate of infrastructure development and quality enhancement of health information systems (e.g., a comparison of the systems' features added or updated)</td>
<td>X</td>
<td>Process-Outcome</td>
<td></td>
</tr>
<tr>
<td>Tier 3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.5-P1 - Change in the proportion of CHR stakeholders reached through dissemination of information (e.g., changes in the satisfaction level of information users)</td>
<td>X</td>
<td>Process-Outcome</td>
<td></td>
</tr>
<tr>
<td>Tier 4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.5-P1 - Rate of service and health information systems</td>
<td>1.5-P2</td>
<td>X</td>
<td>Process-Outcome</td>
</tr>
<tr>
<td></td>
<td>1.5-P3</td>
<td>X</td>
<td>Process-Outcome</td>
</tr>
<tr>
<td></td>
<td>1.5-P4</td>
<td>X</td>
<td>Process-Outcome</td>
</tr>
<tr>
<td>Tier 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.6 Development of self-management</td>
<td>1.6-P1</td>
<td>X</td>
<td>Process-Outcome</td>
</tr>
<tr>
<td></td>
<td>1.6-P2</td>
<td>X</td>
<td>Process-Outcome</td>
</tr>
<tr>
<td></td>
<td>1.6-P3</td>
<td>X</td>
<td>Process-Outcome</td>
</tr>
<tr>
<td></td>
<td>1.6-P4</td>
<td>X</td>
<td>Process-Outcome</td>
</tr>
<tr>
<td>Tier 2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.6-P1 - Rate of investment in self-management practises</td>
<td>X</td>
<td>Process-Outcome</td>
<td></td>
</tr>
<tr>
<td>1.6-P2 - Distribution of information about self-management practises (e.g., frequency of brochures distributed among clients of a LTC service)</td>
<td>X</td>
<td>Process-Outcome</td>
<td></td>
</tr>
<tr>
<td>1.6-P3 - Proportion of clients registered in an LTC service practising self-management</td>
<td>X</td>
<td>Process-Outcome</td>
<td></td>
</tr>
<tr>
<td>1.6-P4 - Proportion of clients in improvement in self-management (i.e., confidence of a client to take part in treatment)</td>
<td>X</td>
<td>Process-Outcome</td>
<td></td>
</tr>
<tr>
<td>Tier 3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.6-P1 - Number of clients added to the database of self-management</td>
<td>X</td>
<td>Process-Outcome</td>
<td></td>
</tr>
<tr>
<td>1.7 Development of provider's capacities</td>
<td>1.7-P1</td>
<td>X</td>
<td>Process-Outcome</td>
</tr>
<tr>
<td></td>
<td>1.7-P2</td>
<td>X</td>
<td>Process-Outcome</td>
</tr>
<tr>
<td></td>
<td>1.7-P3</td>
<td>X</td>
<td>Process-Outcome</td>
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<tr>
<td></td>
<td>1.7-P4</td>
<td>X</td>
<td>Process-Outcome</td>
</tr>
<tr>
<td></td>
<td>1.7-P5</td>
<td>X</td>
<td>Process-Outcome</td>
</tr>
<tr>
<td>Tier 2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.7-P1 - Number of initiatives to enhance capacity and capability of providers serving Māori clients or any subpopulations (e.g., Māori Provider Development Scheme)</td>
<td>X</td>
<td>Process-Outcome</td>
<td></td>
</tr>
<tr>
<td>1.7-P2 - Number of providers that have identified any plans to prevent failure in fulfilling the needs of their clients in a specific area of CHR (e.g., respiratory therapy in homes)</td>
<td>X</td>
<td>Process-Outcome</td>
<td></td>
</tr>
<tr>
<td>1.7-P3 - Provider's ability to cooperate with other providers (e.g., peer satisfaction score)</td>
<td>X</td>
<td>Process-Outcome</td>
<td></td>
</tr>
<tr>
<td>1.7-P4 - Rate of providers' investment in its service infrastructure (e.g., amenities, equipment, staff, systems, and evaluation capabilities)</td>
<td>X</td>
<td>Process-Outcome</td>
<td></td>
</tr>
<tr>
<td>1.7-P5 - Rate of redesign projects that a provider implemented to improve the performance and quality of services</td>
<td>X</td>
<td>Process-Outcome</td>
<td></td>
</tr>
<tr>
<td>1.7-P6 - Number of staff (caregiver and administrative) who have completed required education or special training</td>
<td>X</td>
<td>Process-Outcome</td>
<td></td>
</tr>
</tbody>
</table>

* Physical condition of facilities, competence of providers' staff, communication, accessibility and convenience, acceptability, availability, equity.
In summary, service improvement recognises that enhanced behaviour and practices must be identified and acknowledged and that the services and their capacities (e.g. skills, practices, and equipment) need to be continuously developed to provide clients with better services. This stage encompasses more CSFs and PIs than the other two stages (Planning and Delivery).

1.1 Enhanced efficiency of service [Lit., Fig. 4.17-3.3.1.2]

Some proponents of public service improvement (Rhodes, 1996; Hood, 1995; Osborne and Gaebler, 1992) and health service researchers (Blumenthal and McGinnis, 2015; Derose and Petitti, 2003; Kamis-Gould, 1987) all point to cost reduction as a sign of efficiency improvement. However, others, such as Lee and Nowell (2014) and McLees et al. (2015), emphasise that time reduction in serving clients also indicates improvements of service efficiency. McLees et al. (2015) report that in reviewing the literature on public health quality improvement, efficiency-related improvement is attributed to a reduction or avoidance of cost and time of service process.

Purchasers in DHBs interpreted improvements in efficiency differently and beyond cost reduction. For service managers, improved efficiency links with results, whereas contract managers link it to proper reporting and respecting the contractual requirements. As M2.D1 suggested:

...from our end the things [improvements] that make it easier. I want having it reported on-time; having it reported in a format that we can save it into the system, so electronic as opposed to hardcopy; and useful to the appropriate people as specified by the contract.

The difference between the managers’ views implies that identifying an improvement in efficiency to some extent is role-dependent.

1.2 Enhanced quality of service [Lit., Fig. 4.17-3.3.1.2]

This CSF attempts to augment the CSF of ‘quality of service’ in the delivery stage, emphasising the need for improving the quality of services.

As Chapter 2 explains, quality of health services is defined differently in various fields. In the field of service contracting authors (Martin, 2005b; Martin, 2005a; Kettner and Martin, 1993) attribute service quality to a set of factors indicating how well the delivery is performed. Health care scholars, such as Donabedian (1990) and Maxwell (1992), provide detailed accounts of the quality of care encompassing
multiple dimensions where efficiency and effectiveness are the common dimensions of quality.

Consequently, improving the quality of health services has various dimensions, depending on the perspective from which quality is defined. Regardless of the perspective, the essential purpose of improvement activities is the enhancement of client experience with a service.

As discussed in Chapter 4 (section 4.3.1.4), the majority of improvements suggested by DHBs and NGOs lead to a higher service quality for clients. The problem was particularly highlighted in CPS as M1.D2 explained: ‘another issue is that DHBs have limited power to control the pharmacies behaviour based on the performance. This means once they get the license a DHB must give them funding agreement’. M1.D3 similarly commented: ‘in terms of stakeholders, DHBs have money but have no power to decide about poor performer contractors, like closing them down. The problem is we’ve got monitoring system in place, but we can’t refuse a pharmacy’s contract’. Hence, performance improvement needs to be built into the entire performance management process to enhance clients’ experience with service delivery and outcomes.

1.3 Enhanced effectiveness of service [Lit., Fig. 4.17-3.3.1.2]

According to Donabedian’s structure-process-outcome framework (Donabedian, 1966), the effectiveness of a health service is assessed by the changes in individual and population health which can be either desirable or undesirable. Accordingly, the improvement of service effectiveness considers whether services provided better results in comparison with, for example, last year.

As Giuffrida et al. (1999) point out, measuring health outcomes is a challenge because there are uncontrollable factors which may negatively impact the results of provided services. Likewise, in assessing effectiveness improvements, uncontrollable variables can impact on the assessment results. Hence, judging the performance of service providers based on outcomes can often be misleading due to the inseparability of controllable from uncontrollable factors. Another frustration stems from an unclear border between outcome and process measures as the activities undertaken in service delivery affect outcomes of service (Mant, 2001; Aday and Andersen, 1974). For example, according to Aday and Andersen (1974)
access to care is simultaneously interpreted as both process and outcome measures while the former indicating the degree to which services are equitably distributed among people and the latter indicating how satisfied are the people receiving services. One manager (V2.GD4) explained: ‘service effectiveness can be measured by changes in individual wellbeing. But it’s very hard to measure as the sector is still in its infancy’.

Nevertheless, participants pointed out that changes in the well-being or life status of a client would indicate the effectiveness of services or subsequent improvements. As M1.D2 remarked:

It’s again about value for money. DHBs don’t want to give pharmacies money for filling in just the packs. We want to give the money to improve patient outcomes, so we want better clinical services and oversight not just dumping a box of medicine and walk away. If we think about the LTC services, that’s about funding to support people with adherence issues. We want to keep them out of the hospital, keep them independent. We don’t want them to go to the ARRC facility because it’s expensive. We want to keep them at home which is cheaper. We want to support those people as per the money has been going. 70% of the revenue goes to about 15% of the patients and like 10% of the DHBs population make up spending like 80% of all hospital admissions, so it proves that group overly use medicines – the health services – and with an ageing population it’s getting worse.

Another problem arises when various programmes or projects are undertaken to improve CHS outcomes. The following extract by M1.D3 describes this problem.

Measuring the impact or outcomes of projects is very difficult since there are many projects underway at different levels those are trying to improve the outcomes. So, we can’t say which project is reducing the hospitalisation while most of them believe they perform wonderfully.

Reviewing the evidence suggests that DHBs can foster service evaluation to complement a provider’s performance management (Johnsen, 2013). Evaluation methods and tools (Wholey et al., 2010) can provide insight into the underlying causes of certain outcomes that, in turn, clarify which performance drivers are remediable through working with providers and other stakeholders.
1.4 Recognition of high-performers [Lit., Fig. 4.17-3.3.1.6]

Recognition and incentives are key components of performance measurement systems. They are used to acknowledge high-performers to reinforce positive behaviours, or motivate under-performers to improve (Chenhall and Langfield-Smith, 2007; Neely et al., 2005). Likewise, the literature on health service research argues about the role of financial incentives in quality improvement, linking incentives to outcomes for stimulating quality improvement (Tompkins et al., 2009; Rosenthal and Frank, 2006; Dudley et al., 2004; Rosenthal et al., 2004). As a result, shifting from volume to value-based purchasing has shifted attention to outcomes in measuring and rewarding health service providers.

Porter (2010) and VanLare and Conway (2012) argue that the value of health services is measured by the outcomes achieved and not the volume of services delivered or the process of care. Porter argues further that measuring value is not straightforward as it has linkages with cost reduction that if conducted without regard to outcomes may reduce the effectiveness of care.

The findings of this study align with Porter’s opinion that the value created for a client indicates performance. While the respondents agreed with recognising high-performers, they stressed that measuring providers’ performance is ambiguous and comprises multiple aspects. One manager (V3.GD4) suggested: ‘high performers can be identified by customer satisfaction, positive impact (outcomes) for patients, [and] value for money improvements’.

Therefore, the recognition of a high-performer requires a set of indicators which assess the various dimensions of performance. Preparing such criteria would then facilitate comparisons between providers delivering similar services (Kopczynski and Lombardo, 1999).

1.5 Development of service and health information systems [Lit., Fig. 4.17-1.1.2.5, 3.3.1.10]

Boland and Fowler (2000) contend that the public health sector is a dynamic system. One implication is that continuous development of services and systems is required to adjust provided services to changing needs of the population.

Initially, the study attempted to attribute service development to the level of innovation across the health system represented by the number of new service
initiatives. However, some validators in GD4 (Step 22) emphasised assessing the risks of innovation. Thus, the approach for identifying developments of service and information systems was extended to include the risks of implementing changes.

In terms of developing the systems underlying health service provision, as discussed in the previous chapter, participants expressed different concerns depending on their relationship in the contract. Concerns that frequently appeared across both DHBs’ and NGOs’ responses are the expansion of the health information systems, setting the KPIs for LTC services, clarifying quality definitions for LTC services, and enhanced communication among the actors in the health sector.

I.6 Development of self-management [Lit., Fig. 4.17-3.3.1.2, 3.3.2.2]

Patient education has been nominated by The U.S. Institute of Medicine (2001) as a means to improve self-management which is a component of patient centred care. Therefore, a CSF is designated for self-management, highlighting an area that needs to be developed for improving the quality of services (Richards et al., 2015). For DHBs, educating clients is an indicator of performance to the extent that M1.D3 described:

> What separates a bad pharmacist from a good pharmacist is how he/she gives proper information to the patients. Build and maintain a good relationship with them about the expected outcomes of the medication and educate them on how to use the medications according to the regimen, So, it’s generally about they must know about the patients and the fact that what affects them.

As explained in Chapter 4, the ALTC 2014 emphasised the significance of educating patients in LTC services as an avenue to improve quality. The participated NGOs also value educating their clients to the extent that some of them have selected patient education as a measure of provider performance. For example, NGO5 explained:

> Performance is the quality of services which is delivered to all customers. For example explaining to in-store customers about taking prescribed medicines or how well a pharmacist will respond to a customer’s needs and wants. The results of this performance can be measured by customer feedback and loyalty to the pharmacy.
Therefore, developing self-management is considered in the service improvement stage by giving patients the required knowledge to be an active participant in treatment (Lorig and Holman, 2003).

1.7 Development of provider’s capacities [Lit., Fig. 4.17-3.6]

Researchers of community-based services are concerned that the financial burden of funder’s accountability mandates detracts from the providers’ investments directly impacting the quality of services (Hasenfeld, 2015; Carnochan et al., 2014; García-Iriarte et al., 2011). To reduce the tension, these researchers argue that public funders need to reduce the NGOs’ costs for satisfying the accountability mandates. Thus, NGOs will be able to redirect the released resources to building the capabilities required to improve the quality of services (e.g. investment in the development of quality management systems or service equipment).

However, there was a divergence of opinions on this issue between DHBs and NGOs. The NGOs expect DHBs to support them in developing their organisational capacities such as using information systems. As NGO5 suggested: ‘to improve performance, DHBs should incentivise pharmacies to use tools like computers and databases’.

In contrast, purchasers have broader concerns spanning both providers’ capacity building and outcomes improvement. One manager (V2.GD4) suggested he would: ‘rather see improvement to patient outcomes than provider-centric capacity growth and efficiencies to the system that improve outputs while remaining within or below budget’. Another manager (V4.GD4) noted ‘increased investment in clinical infrastructure. Number of empowerments with Māori development organisation’.

In order to include different views about building providers’ capacity, this study proposes a set of indicators to assess the developments that providers carried out to improve their performance and service quality.

5.3.3.5 PIs of Service Improvement

Neely et al. (2000) emphasise performance measurement must entail continuous improvement. The extent to which improvements are measured depends on the baselines set in strategic plans and the comparisons with the results achieved under previous plans or the benchmarks of performance (Bolton, 2003; Kopczynski and Lombardo, 1999).
However, Neely et al. (2005) point out that identification of improvement opportunities is difficult. This problem leads business managers to consider benchmarking options. The authors argue that relying on others to develop best practices increases the risk of being a follower instead of a leader in the sector. Therefore, comprehensive development based upon innovation, education, and strengthening organisational capacities along with benchmarking practices is recommended for independently improving performance.

Again, for each CSF, the PIs are either determinants or results. Also, they are classified as structure, process, or outcome measures to show where improvement would likely impact along the service process. For example, in the first CSF (I.1: Enhanced efficiency of service), all PIs (I.1-PIs)\(^5\) are the results of enhanced efficiency and lead to improvements in the process stage of service delivery. Figure 5.4 also shows the PIs formulated to assess the performance in the third stage.

To measure the conditions of the CSFs that underlie service improvement, the first three sets of PIs (I.1-I.3) in tier one (shaded grey in Figure 5.4) measure the extent to which dimensions of performance initiated in the planning stage and implemented in the delivery stage has enhanced. The next (I.4) set in tier two (white are in Figure 5.4) is exclusively assigned to acknowledging high-performers. The aim is to first identify high-performers and then encourage them to continue improving their performance. The next three sets of PIs (I.5-I.7) in tier three (shaded grey in Figure 5.4) concentrate on exploring potential developments to improve performance in the next purchasing cycle.

**Tier One: Enhanced efficiency, quality and effectiveness of service**

**I.1-PIs: measuring the enhanced efficiency of service**

Improved efficiency means that less (the same) input has been employed to produce a similar (higher) level of output. Martin et al. (2007) identified time and cost as two main dimensions for measuring how efficiently health services are

\(^5\) I.1-PI1: Time saved to complete the delivery of a specific service  
I.1-PI2: Costs saved to complete the delivery of a specific service  
I.1-PI3: Change in days until the next available appointment with a caregiver  
I.1-PI4: Change in number of steps to complete a specific service  
I.1-PI5: Costs avoided due to changes in delivery of a specific service  
I.1-PI6: Change in cost per client for providing each specific type of CHS
operated. Based on these two dimensions, five PIs are used to assess the degree to which the efficiency of CHS has been improved.

The time saved to complete the delivery of a specific service (McLees et al., 2015) is measured by \textit{I.1-PI1 [Lit.]}. For example, improved skills of caregivers can reduce the time of delivery. The costs saved to complete the delivery of a specific service (McLees et al., 2015) is assessed by \textit{I.1-PI2 [Lit.]}. These two PIs show whether the provider was able to save resources while improving quality and effectiveness (Donabedian, 1990). Undesirable variations, such as increased or unaltered time or cost of service, must be analysed to determine the underpinning causes. Measuring saving is not the only way of identifying improved efficiency. The delivery process of specific services may require more time or cost due to the complexity of client conditions. Thus, measuring the variation of time or cost in the delivery of a service needs to include other factors such as the type of service or client’s condition.

Lee and Nowell (2014) and McLees et al. (2015) articulate that process-based measures are used to better understand the elements constituting an improvement in service output. Hence, the change in days until the next available appointment with a caregiver (Mpinga and Chastonay, 2011; Martin et al., 2007) is indicated by \textit{I.1-PI3 [Lit.]}. This PI measures access to service, particularly when delivery depends on availability of staff (e.g. doctor, dentists, home caregiver, physiotherapists), which can be affected by various factors such as staff shortages, labour market conditions, or funding. The fourth PI (\textit{I.1-PI4}) measures the change in the number of steps to complete a service or process [Lit.]. McLees et al. (2015) argue that reducing the number of steps in completing a specific service is a sign of improved efficiency. Thus, a decreased (increased) number of steps shows an improvement (deterioration) in provider performance. However, a change in the number of steps can also happen due to changes in the mix of low and high complex clients so this measure needs to take other factors into consideration. The costs avoided due to changes in the delivery of a service (McLees et al., 2015) is assessed by \textit{I.1-PI5 [Lit.]}. Cost avoidance can be the result of, for example, using better technology or more efficient working practices in the delivery of a service.

The sixth PI (\textit{I.1-PI6}) measures the change in cost per client for providing each specific type of CHS [Lit.]. For example, the average service cost for older clients
using home care services whose needs are assessed as non-complex within casemix funding categories. As Donabedian (1990) contends, improving efficiency means lowering health service costs while quality and effectiveness are maintained or improved. This PI provides a summary of the improvements in service efficiency, which are separately measured by I.1-PI1 to PI5, in terms of the cost of serving one person in each specific area of CHS.

This PI builds on the measure that Martin et al. (2007) propose. That is, cost per capita is a measure of the total health care expenditure for a group of people living in a certain geographic area. The definition of this measure applies to DHBs, who are accountable for fulfilling the health needs of people in their catchment area efficiently.

While the respondents commented that measuring efficiency must be related to the results of service, various authors argue for better health at lower cost (Blumenthal and McGinnis, 2015; McLees et al., 2015; Donabedian, 2002). Therefore, this study adjusts the measure that Martin et al. (2007) suggest to stress the necessity of assessing efficiency improvement in relation to service results.

I.2-PIs: measuring the enhanced quality of service

Measuring enhanced quality examines whether the activities contributing to the quality of services have improved. A variation in each activity reflects either desirable or undesirable changes in performance. As explained previously, to avoid misleading judgements about providers’ performance, a root-cause analysis is essential to discern the underlying reasons for undesirable changes (Longtin et al., 2010; Behn, 2003; Giuffrida et al., 1999).

The first PI (I.2-PI1) indicates change in the proportion of clients satisfied with the delivery of a specific provider [Lit., Fig. 4.17-3.3.2.1, 3.3.2.5]. Measuring improved quality conforms to the growing interest in patient-centred care (e.g. Richards et al., 2015; International Alliance of Patients' Organisations, 2014; The U.S. Institute of Medicine, 2001).

The second indicator (I.2-PI2) measures the number of adjustments or amendments made to match the service specifications with the client’s needs [Lit., Fig. 4.17-3.3.2.8]. This PI can have conflicting implications. On the one hand, it may demonstrate the efforts made to adjust service to the needs of clients
(Blumenthal and McGinnis, 2015), showing the degree to which patient-centeredness has developed.

On the other hand, it may indicate a faulty needs assessment or failed delivery that necessitated corrections to recover service (Grönroos, 2004). In either case, this indicator provides some insights into quality improvement. Even if it does not show the level of patient-centeredness, it can at least help to identify actions undertaken to recover service and associated costs.

Aligned to the measurement of adverse events in the service delivery stage, the third PI \( (I.2-\text{PI3}) \) indicates the change in the number of adverse events \( \text{[Lit., Fig. 4.17-3.3.2.3, Appx. 13]} \). This PI reflects whether patient safety has improved (Blumenthal and McGinnis, 2015; Martin et al., 2007). Improved safety can be indicated, for instance, by the reduction of adverse incidents (e.g. falls in home care services\(^{55}\) or Adverse Drug Reactions\(^{56}\) in pharmacy services).

Martin et al. (2007) postulate a measure of ‘incidence of nonfatal occupational injuries and illnesses’ which evaluates the safety of the health care environment for health workers. Furthermore, in the context of person-centred care (Richards et al., 2015), the safety of caregivers is equally important. Managers in DHBs are concerned about the safety of carers as well as patients. For example, M3.D2, who reviewed a draft of PMF, emphasised that ‘safety must consider service clients, their carers, and families’.

As a result, the fourth PI \( (I.2-\text{PI4}) \) measures the change in the number of reported occupational incidents occurring to health workers including, for example, work-related infections, and illnesses \( \text{[Lit.]} \). Changes in this number denote whether or not a safer working environment and practices have been achieved. M3.D2 stressed that safety must include carers as well.

The fifth indicator \( (I.2-\text{PI5}) \) is the rate of improvement in the knowledge and skills of health workers \( \text{[Lit., Fig. 4.17-3.3.6.1]} \). One way of measuring the


\(^{56}\) ADR. A response to a drug which is noxious and unintended, and which occurs at doses normally used in man for the prophylaxis, diagnosis, or therapy of disease, or for the modifications of physiological function. Available at: [http://www.who.int/medicines/areas/quality_safety/safety_efficacy/trainingcourses/definitions.pdf](http://www.who.int/medicines/areas/quality_safety/safety_efficacy/trainingcourses/definitions.pdf) [accessed 21 Feb. 16]
improvement of health workers is the proportion of community health workers who
have completed training (Aarons et al., 2009). As discussed in Chapter 4, the NGOs
also consider the training of caregivers as a driver of service improvement.

Thus, this PI stresses the importance of continuous training of health workers
(both caregivers and administrators) for acquiring state-of-the-art methods and
techniques required for improving the quality of service. This PI links, to some
extent, with developing the provider’s capacities (I.7 in tier 3 of the service
improvement stage), the first CSF in the delivery stage (D.1: Capacities of service
provider), and Grönroos’s functional quality where one dimension of perceived
quality is the competencies of service staff (Grönroos, 1984).

The sixth PI (I.2-PI6) measures the rate of improvement in equity interpreted as
addressing deprivation and social exclusion for different subpopulations [Lit., Fig.
4.17-3.3.2.4, Appx. 13]. Donabedian (1990) described measures of equity in terms
of a fair distribution of health services, accessible to all, responsive to everyone, and
equal funding among subpopulations. Authors, such as Sitzia and Wood (1997) and
Mpinga and Chastonay (2011), provide evidence that equity is a measure of service
quality, contributing to clients’ satisfaction. In terms of stakeholders, Smith et al.
(2008) enumerate government, taxpayers, and providers as interested parties in
equity.

Nevertheless, according to Martin et al. (2007), measuring equity is a challenge.
They propose measuring equity by the difference in outcome at a system-wide level
measure (e.g. patient satisfaction) stratified by different subpopulations (e.g. gender,
age, and ethnicity). There are various ways to measure equity that could include the
above measure, the number of social development plans and surveys.

I.3-PIs: measuring the enhanced effectiveness of service

Given the mission of health systems to improve value for clients (Porter, 2010),
improving outcomes is the major vehicle to accomplish this. Thus, the first PI (I.3-
P11) is the improved individual health or life condition score for a client of a service
obtains [Lit.]. As discussed earlier, there are some instruments designed for
measuring a client’s life condition (e.g. QoL), general health status (e.g. HRQoL),
and disease-specific health status (Smith et al., 1999; Felce and Perry, 1995; Patrick
and Deyo, 1989). A comparison of the clients’ current condition scores with their
historical records would indicate the degree to which the effectiveness of service has improved.

The second indicator (I.3-PI2) is the modified behaviour or attitude score [Lit.]. In effect, an improvement in effectiveness is measurable by, for example, the reduction in recurrence of bad behaviour (e.g. recidivism\(^{57}\) rate) or presence and continuation of a desirable behaviour. Lee and Nowell (2014) consider the modified behaviour of a client as an outcome indicator, without specifying the type of service. Based on the study's experience, modified behaviour can address the improvement of mental or behavioural disorders which is one area in LTC services. During the review of the PMF version 3, M4.D2 stated ‘in mental health that [outcome] is always a very hard one because recovery is very subjective. We don't have an x-ray to say your ribs are repaired, we don't have your appendix sitting in a jar saying look it’s gone. We don't have that’. For that reason, performance measurement in mental health services currently relies on input and output measures.

Similarly, Adair et al. (2003) contend that measuring the outcomes of community mental health services is a challenge because of its reliance on continuity of care. As a result, in this study, the modified behaviour or attitude score is a generic outcome indicator measuring the improved effectiveness of mental and behavioural rehabilitation services using an instrument such as HoNOS\(^{58}\) scores.

The third PI (I.3-PI3) measures the change in the rate of readmission to the service or hospital\(^{59}\) [Lit., Fig. 4.17-3.3.4.1]. A reduction in the readmission rate due to service failure, shows the degree to which service effectiveness has been improved. An example is lower readmission rates to the hospital due to poor drug safety and drug interactions checking by a pharmacist. Martin et al. (2007) propose that hospital readmission is a measure of outcome. Likewise, in service marketing,

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\(^{57}\) Recidivism is one of the most fundamental concepts in criminal justice. It refers to a person's relapse into criminal behaviour, often after the person receives sanctions or undergoes intervention for a previous crime. Recidivism is measured by criminal acts that resulted in rearrests, reconviction or return to prison with or without a new sentence during a three-year period following the prisoner's release. Available at: [http://www.nij.gov/topics/corrections/recidivism/pages/welcome.aspx](http://www.nij.gov/topics/corrections/recidivism/pages/welcome.aspx) [accessed 22 Feb. 16]

\(^{58}\) Health of the Nation Outcome Scale. Available at: [http://www.rcpsych.ac.uk/crtu/healthofthenation.aspx](http://www.rcpsych.ac.uk/crtu/healthofthenation.aspx) [accessed 19 Jul. 16]

\(^{59}\) See Appendix 8, item 4 under 8: ‘Quality services result obtaining well-being and independence from health services’.
Grönroos (2004) argues that service recovery comprising efforts made to compensate service failures is a dimension of service quality.

The study consistently found concerns among managers that readmission to service or hospital should be an outcome measure. Particularly in CPS, M3.D1 explained: ‘hospitals have an interest in if pharmacies are doing a very good job or if patients are readmitted because pharmacies are not working through adherence problems’. Likewise, M1.D3 commented:

"I've started a new process where I'm building up a network that started in the hospitals but now is branching to the GPs in which if there are incidents with the pharmacies they will let me know about it such as dispensing etc. Then I will go back to the pharmacies to make sure that they are following the correct process which I think it's probably quite unique from the portfolio manager point of view."

In the practitioners’ view, readmission requires a root cause analysis to configure whether it happened due to a service failure or non-service reason. M4.D2 clarified the necessity of analysing reasons:

"It's [readmission to the hospital] a measure. Consumers debate whether it's a good measure. You know, some people will say, you know, I don't want to take the medication, it sedates me, makes me fat, gives me diabetes, I won’t take it. So I'm willing to risk the occasional hospitalisation not to take your medication and, you know, at the end of the day that's their right and their choice and we can see where they're coming from...And that’s very problematic because the only way we can, and it has happened, but it’s usually through going through notes, clinical notes. It’s a very manualised process. And a lot of our processes are, like, we needed to collect ED [emergency department] admissions around drugs and alcohol abuse. That had to be done by notes. There was no way of recording that someone goes to an emergency department for, you know, a drug related issue. Even simple stuff like that can become quite complex".

The fourth PI (I.3-PI4) measures the change in the percentage of the target population that has been offered, received, and completed a specific service (Lit. Fig. 4.17-3.3.2.3). McLees et al. (2015) argue that an effective health care system is able to cover as large a target population as exists. Hence, the increased reach to the target population can be seen as a sign of improved access to health services by clients.
As discussed earlier, access to health care services is one of the common measures to assess service quality from various perspectives including patient satisfaction (Mpinga and Chastonay, 2011; Sitzia and Wood, 1997), and population health (Smith et al., 2008; Derose and Petitti, 2003; Glasgow et al., 1999).

Murray and Frenk (2000) assert that access to health services may significantly enhance health outcomes. Similarly, managers in DHBs are concerned about clients’ access to CHS. In GD2, a manager in community oral health services provided the following details around how access to service is important in terms of measuring the performance of CHS providers:

> If our contractors are not located in a right area, this can be an access issue for any service [CHS]. Again the population would be affected because they can’t access the service...From the performance, we think there is an opportunity to reach even more people so they might not be performing as well because they are not going out there and actively maybe promoting their service or maybe they are not linking in with other service who can refer the patients to them, maybe they are set up in the wrong location, maybe their opening hours are not long enough, or there is no access for people with parking. We look at the performance from that side of things...it’s important for the MOH to be able to see what sort of population is accessing these services, is it mainly the Asian population, or is it mainly the NZ-European, is Māori under-represented that means the ethnographic distribution of service users.

The fifth indicator (I.3-PI5) is the change in the rate of incidence or prevalence of a disease or condition in the target population [Lit., Appx. 13]. If all other variables are kept constant, an effective health service system will make a population healthier (McLees et al., 2015). This PI is more relevant to preventive and educative activities where the health of communities can be improved by vaccination, preventive health practices (e.g. physical exercise or dietary plans), and educating clients to maintain and increase their wellbeing (e.g. educating an older client to prevent falling in their home).

The improved health status or well-being of clients using a specific CHS (Wagner et al., 2001) is measured by I.3-PI6 [Lit.]. As a summary indicator, this PI can be measured, for example, by the average QoL score of clients using an LTC.
service such as asthmatic patients or ADL\textsuperscript{60} scores for clients using HOP services. Thus, the average score, compared with the score gained in the last year, would show the extent to which a service has changed the health of a group of clients.

**Tier two: Recognition of high-performers**

*I.4-PIs: Measuring the recognition of high-performers*

Recognising and incentivising high-performers are among the principles of designing performance measurement systems (Ferreira and Otley, 2009; Neely et al., 2005; Simons, 1995). To acknowledge high-performers, the first step is to clarify what constitutes good performance.

Respondents were critical of suggesting award-winning as a sign of high performance. One manager (V5.GD4) noted ‘winning an award is not an indicator of quality. Acknowledgement can have other avenues than awards’. Rather, these managers preferred to look at evidence of improved performance such as customer satisfaction, positive impact (outcomes) for patients, and value for money improvements.

Following the respondents’ views, the study articulated a set of PIs to recognise high-performance providers. The first PI (*I.4-PI1*) is the overall clients’ satisfaction (with the delivery process), and experience (post discharge results) score that a provider obtains through any means of client feedback [*Lit., Fig. 4.17-3.3.2.1*]. The second PI (*I.4-PI2*) indicates the overall clients’ functional health outcomes score a provider obtains [*Lit., Fig. 4.17-1.1.3.5, 3.3.4.1*]. This score is measurable by, for example, HRQoL tools such as the Sickness Impact Profile (Gilson et al., 1975).

The third indicator (*I.4-PI3*) is the improvement rate of VfM (e.g. an overall appraisal of enhancements – high, medium, low, zero – in the above CSFs: I.1-I.3), obtained by a provider, compared to regional or international benchmarks [*Lit., Fig. 4.17-1.3*]. This indicator can be reflected in the summation of enhanced efficiency, quality, and effectiveness of a service (Boland and Fowler, 2000). The regularity of positive and constructive feedback to motivate high-performers and encourage low performers to improve their performance (Tompkins et al., 2009; Rosenthal and

\textsuperscript{60} The Instrumental Activities of Daily Living Scale is based on a sum of seven items: meal preparation, ordinary housework, managing finances, medications, phone use, shopping, and transportation. Available at: [http://www.interrai.org/scales.html](http://www.interrai.org/scales.html) [accessed 16 Jul. 16]
Frank, 2006; Rosenthal et al., 2004) is assessed by \textit{I.4-PI4} \cite{Lit., Fig. 4.17-3.3.1.3, 3.3.1.6}. The item presents a broad approach to incentivise providers, highlighting the necessity of continuous communication to improve quality. One way of measuring improvements made is the number of formal communications within a year by DHBs to inform NGOs about their own performance.

In terms of incentivising high-performers, pay for performance contracting methods, such as performance-based contracting and value-based purchasing, connect the incentives to health outcomes \cite{VanLare and Conway, 2012; Sutton et al., 2012; Porter, 2010}. Therefore, incentivising contractors has been developed in various outcome-based contracting methods, which are now used in public health systems in the USA and UK as well as New Zealand\textsuperscript{61}. Contractors’ performance is measured by the quality and results of their services and they receive incentives to deliver quality services.

\textbf{Tier three: Development of service and health information systems, self-management, and provider’s capacities}

\textit{I.5-PIs: measuring the development of service and health information systems}

Service development is a key factor in improving services that emphasises the need for adjusting the capacity and design of CHS with the evolving needs of the population \cite{Bazzoli et al., 1997}. Furthermore, developing information systems facilitating the exchange of patient’s information was imperative for some of the participants to improve the quality of CHS. Specifically, the proponents of integrated health care highlight the necessity of developing information systems to improve performance in terms of quality and safety \cite{Suter et al., 2009; Gröne and Garcia-Barbero, 2001}. Hence, appropriate measurement is required to assess whether the development process satisfies the demand for integrated systems.

The PIs allocated to this area are those principally proposed by the respondents who reviewed a draft of the PMF as discussed in section 4.3.1.4. This set comprises seven PIs, in which five indicators assess the development of new services and two PIs measure the growth of health information system.

\textsuperscript{61} Streamlined contracting. Available at: http://www.health.govt.nz/about-ministry/what-we-do/streamlined-contracting \cite{accessed 4 Jan. 16}
The first PI (I.5-PI1) is the number of NGOs, providing a specific service (e.g. home care providers) enrolled in new service initiatives established by DHBs [Appx. 13]. Initiatives are projects that DHBs introduce to improve the quality of various aspects of health services. This number shows the degree to which providers have embraced new practices. The second indicator (I.5-PI2) examines the number of submissions to innovation awards, describing the breadth of innovative ideas across the health system [Appx. 13]. This is measurable by the number of innovative ideas in health care received by, for instance, New Zealand Health Innovation Hub. The third PI (I.5-PI3) assesses the novelty of innovative ideas to prevent wasting resources on old ideas [Appx. 13]. The novelty of an idea can be checked by investigating its previous existence in the same area (e.g. health information technology) which shows whether the idea is originally new, reinvented, or old. Unlike the first three PIs, the fourth PI (I.5-PI4) is a determinant that measures the risk of implementing the new ideas [Appx. 13]. This PI emerged after one manager (V3.GD4) cautioned: ‘innovation is good – but destabilising the system is at risk if you are always trying new things’.

Innovative ideas can be first tested through a pilot project to identify the possible consequences of change. For example, the PDCA has been regarded as a method to assess the potential risks of implementing quality improvement initiatives in public health before diffusion across the entire system (Beitsch et al., 2015; Rosati, 2009). Through this limited implementation, the cost and other consequences of new trials can be used to identify the risks associated with full implementation of the change.

The fifth PI (I.5-PI5) indicates the number of lessons learned from past failures (e.g. the number of the past failure records reviewed to reinvent a service) [Lit., Fig. 4.17-3.3.1.10]. Although measuring this issue is subjective, to some extent it addresses the notion of learning from experience to improve future performance (Argyris, 1991; Argyris, 1970). In order to facilitate the measurement of learning from past failures, the study suggests considering the number of past failure records which have been retrieved and reviewed when revising a service.

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Two remaining PIs focus on the development of information systems. The development rate of infrastructure and quality enhancement of health information systems (Suter et al., 2009) is measured by I.5-PI6 [Lit. Fig. 4-17-1.1.2.5]. The development of information systems can be measured by a comparison to identify changes that enhance the flow and quality of information.

Lastly, the change in the proportion of CHS stakeholders reached through the dissemination of information (McLees et al., 2015) is measured by I.5-PI7 [Lit., Fig. 4.17-2.2.1.2, 2.2.1.4]. Thus, this PI reveals to what extent the development of information systems, and other communication channels such as performance reports, have been able to improve the access of stakeholders to their required information. This change can, for example, be measured by comparing the satisfaction level of stakeholders using CHS-related information with the previous round of planning.

I.6-PIs: measuring the development of self-management

Richards et al. (2015) note that the central mission of patient-centred care is the escalation of self-management. Likewise, this study discerned that self-management, particularly, in LTC services is a mounting concern among health practitioners and researchers. Self-management is a significant avenue to empower the clients of health services to gain control over their care (Lorig and Holman, 2003). Similarly, the concept of patient empowerment is of paramount importance to practitioners to the extent that they prefer empowering the patient to provider empowerment. One manager (V2.GD4) proposed considering ‘improvement to patient outcomes rather than provider-centric capacity growth’.

This evidence is compatible with the increasing attention in LTC services to improving health outcomes via educating and enabling clients to care for their condition (Longtin et al., 2010; Epping-Jordan et al., 2004; Lorig and Holman, 2003; Wagner et al., 2001).

Building upon the study’s findings and insights from the literature, a set of relevant PIs are presented. The rate of investment in self-management practices (Lorig and Holman, 2003) is indicated by I.6-PI1 [Lit., Fig. 4.17-3.3.2.2, Appx. 13]. This PI compares the funding allocated to develop self-management programmes with the total investment in the health system. The distributed information about
self-management practices (Longtin et al., 2010) is assessed by \textit{I.6-PI2 \cite{Lit., Fig. 4.17-2.2.1.2, 3.3.2.5}}. This PI assesses the extent to which information about the programmes promoting self-management is available to involved parties, including clients themselves. It can be measured by, for example, the frequency with which brochures about self-management are published and distributed to clients of a specific line of LTC services (e.g. the principles of self-management for older clients).

The proportion of clients registered in an LTC service practising self-management (Wagner et al., 2001) is measured by \textit{I.6-PI3 \cite{Lit., Fig. 4.17-3.3.2.2}}. This PI shows, for example, the degree to which self-management is developed for asthmatic patients. The fourth PI (\textit{I.6-PI4}) measures the number of reported changes in behaviour as the result of self-management \cite{Lit., Appx. 13}. The respondents suggested an evidence-based approach to measure the results of self-management. For example, one manager (V3.GD4) suggested: ‘it is better to observe evidence of change in behaviour’. Lorig and Holman (2003) suggest that change in behaviour can be measured by the confidence level of clients with chronic conditions to carry out an action plan, preferably in the short-run, which requires them to take part in their treatment. For example, the level of confidence of patients to manage their physical activities, set out in a care plan, or their ability to take dispensed drugs based on the medication plan.

\textit{I.7-PIs: measuring the development of provider’s capacities}

As explained in the service delivery stage, CHS providers need to strengthen their organisational capacities to accomplish their mission to improve the health of the population. Some researchers of CHS point to the role of funders in supporting NGOs in building their evaluation capacities (Liket et al., 2014; Carnochan et al., 2014; Benjamin, 2013; García-Iriarte et al., 2011; Carman, 2007).

As previously noted, the managers in DHBs are also aware that NGOs encounter problems in fulfilling the accountability mandates. For instance, M1.D3 explained: ‘profit making is another barrier in performance reporting. For pharmacists and GPs [completing forms] cost money by taking time out of their business to fill out the forms whereas for staff at the hospitals it is just part of their routine job’. NGO7 also noted: ‘LTC is about recording what we are doing, and I
found when we do LTC it takes up more time to record, and it’s somehow impossible to record everything and takes me away from the shop’.

Evidently, the DHBs’ opinion about building providers’ capacities is different from the NGO’s viewpoint. The NGOs, who participated in data collection, pointed out the need for DHBs’ support in two areas. Firstly, clarifying what the expectations are for services and, secondly, empowering the NGOs to measure the quality of LTC services. Nonetheless, the respondents in DHBs were critical of measuring providers’ empowerment through organisational capacity developments. Rather, they suggested alternative approaches which are reflected in the following PIs.

Enhancing the services provided to Māori clients was noted by a validator (V1.GD4). Thus, the first PI (I.7-PI1) is the number of initiatives to enhance capacity and capability of providers serving Māori clients or any subpopulation [Fig. 4.17-3.3.6.2, Appx. 13]. This indicator is a determinant for improving the services provided to a subpopulation of the New Zealand society. Emphasising the improvement of services for a specific group of clients addresses the issue of elevating equity in serving subpopulations. For instance, in 2016 the MOH provided funding to Māori health and disability service providers for outcomes that link investment to capacity and capability improvement. The aim of the funding is to increase access, achieve equity, and improve outcomes for Māori.

The second PI (I.7-PI2) is the number of identified any plans to prevent failure in fulfilling the new needs of clients in a specific area of CHS [Lit., Fig. 4.17-1.1.1.1]. For instance, financing plans for new technology to migrate respiratory therapy from hospital to home-based delivery. This PI measures the preparedness of the health system to tackle problems impeding the continuity of health service provision (Murray and Frenk, 2000).

The third PI (I.7-PI3) assesses the provider’s ability to cooperate with other providers [Lit., Fig. 4.17-2.2.1.3, Appx. 13]. This PI was proposed by one manager

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This element affirms the role of inter-organisational collaboration (Liket et al., 2014; Provan et al., 2002), particularly among ‘organisations working in similar areas’ (Carman and Fredericks, 2010, p.85), in improving CHS. The improvement of this ability is measurable, for example, via a peer satisfaction score. This score can indicate the degree to which NGOs are satisfied by the collaboration of other providers in areas such as sharing clients’ information. For example, pharmacies and GPs need to regularly exchange the LTC clients’ health information in order to ensure the right care. NGO4 explained: ‘GPs would probably contact us several times a day, but that’s more to do with prescription areas and drugs. This is an informal phone call. We don’t have regular meetings with any of them’.

The rate of provider’s investment in the service infrastructure (Mpinga and Chastonay, 2011) is measured by $I_7$-$PI_{14}$ [Lit., Fig.4.17-3.3.5.1 to 3.3.5.3]. This PI evaluates, for example, how much a provider invests in developing facilities, equipment, staff, systems, and evaluation capacities which enhance service quality and outcomes.

The final two PIs measure the results of the provider’s performance in developing organisational capabilities. Hence, the number of redesign projects that a provider implemented to improve the performance and quality of services (Mpinga and Chastonay, 2011) is assessed by $I_7$-$PI_{15}$ [Lit.]. Lastly, the sixth indicator ($I_7$-$PI_{16}$) measures the number of caregivers and administrative staff who have completed required education or special training [Lit., Fig.4.17-3.3.6.1]. This PI addresses improving functional quality of providers (Grönroos, 1984).

This concludes the detailed description of the PDI. The next section explains lessons learned from developing the PMF.
5.4 Discussion

The research process in building the PMF provided insights into the field of performance management, especially performance management of CHS contractors. This section discusses the lessons learned and compares them with findings of other studies.

5.4.1 Revisiting the Conceptual Framework- Restructuring the PDCA as PDI Cycle

The PDCA cycle was chosen as the platform for developing the initial conceptual framework. As discussed in Chapter 4, after several iterations the investigation revealed that the original structure of the PDCA is inconsistent with the nature of the CHS purchasing cycle. As a result, the PDCA was restructured to a three-stage cycle that consists of Planning-Delivery-Improvement (PDI) and was driven by several factors explained in the following three parts.

1. Embedding the Check in the Plan-Do-Act stages

The first revision reflects the insight that measurement is an embedded element in every stage of the performance management process rather than a discrete stage as conventionally showed by Check in the PDCA (or Study in PDSA). This means that measurement occurs while the performance is carried out in the planning, delivery, and improvement stages.

2. Distinguishing among intermediate processes from PDI

A further departure from the initial PDCA was to introduce intermediate processes reflecting transfer points between stages of the PDI. Figure 5.1 labels these intermediate processes contracting, evaluation, and intervention.

Contracting is the vehicle for converting plans to services (Brown et al., 2006). Public service contracting has shifted from purely transactional to relational (Porter et al., 2013; Van Slyke, 2007) that impacts on the management of service delivery. Relational contracting requires communicating with providers about expected performance beyond the formally contracted transaction (Broadbent and Laughlin, 2009; Brown et al., 2006). Hence, this study disentangles contracting from the service planning and delivery stages in the PDI. This distinction is necessary because without distinguishing contracting from delivery, the impact of contract management on the CHS providers’ performance cannot be clearly understood.
Furthermore, this distinction better reflects how service managers at DHBs, working with NGOs, regard themselves as relationship managers. As M3.D1 described it:

> I am the relationship manager. I email pharmacies a lot about different issues, particularly about the contract. I am the information filter for the pharmacies. We have set communications (approximately monthly) which come from the national group. Pharmacies would contact me individually if they wanted a variation to the contract, so we have service variations which is very common like special food and Clozapine

Evaluation is a process which enables public purchasers to delve into the causes of actual results of provided services (Whooley et al., 2010; Rossi et al., 2004; Gabor and Grinnell, 1994). Showing evaluation as a separate process in the PDI highlights the fundamental difference between performance measurement, as an element of the process, and programme evaluation, as a set of specialised techniques and tools used to assess the outcomes of specific services (McDavid et al., 2012; Kettner et al., 2012).

The incorporation of evaluation as an intermediary process in the PDI combines the advantages of performance measurement and evaluation methods to enrich performance information (Van Dooren et al., 2015; Carnochan et al., 2014; Johnsen, 2013; Rouse and Putterill, 2003). Evaluation is exclusively used in performance management to understand underlying reasons for certain outcomes and to find required improvements.

Intervention recognises the transforming process that translates required improvements into specific actions. Intervention comprises actions that incorporate improvements to the next purchasing cycle. Consistent with the sentiment of change management in the health sector (Campbell, 2008), intervention entails changing the routines and attitudes of health service providers and their staff. Hence, it must be deliberately structured to successfully diffuse new thinking and technology, while diminishing actors’ resistance to change.

Figure 5.1 also shows interim feedback flows between stages of the PDI. These flows indicate the need for single and double loop learning (Argyris, 1976) to continually improve the management of CHS performance. Feedback from service delivery to the planning stage is provided by reporting, audits, and feedback from providers and clients. As discussed in Chapter 2, accountability has been
considerably formalised in public service planning whereas client feedback is typically restricted to use within the service delivery stage.

Nonetheless, client experience can be fed back to planning while delivery is in progress. This feedback provides another tool for continuous monitoring of service providers. Feedback from clients and providers may trigger changes to the current contract which are often implemented by issuing contract variations. However, these variations furnish only immediate adjustments to services that are different from major service improvements which require time to be identified.

The identification of the intermediate processes implies that the overall performance of CHS providers is influenced by performance in the PDI and intermediate processes.

3. The role of time in performance improvement

The research considered the annual purchasing cycle as the level of analysis. The thesis discussed the outcomes of health services over time, classified into short-term, medium-term, and long-term outcomes. The passage of time means there is no opportunity to return to the starting point (beginning of the year) and adjust the initial conditions to improve the services. Figure 5.5 shows that introducing time creates an ongoing performance management process rather than a closed loop process.

![Figure 5.5 A Spiral Model of the CHS Performance Management Process](image)

Acknowledging the role of time in the performance management process led to conceptualising the process as a series of open loops. This representation is referred
to as a spiral model of performance management where each PDI represents an annual purchasing cycle.

This spiral model also suggests a different view on management control cycles in operating organisations (Anthony, 1988). The nature of ongoing processes has informed the suggestion to consider multiple cyclic models of performance management. Instead of considering performance management and control as a closed loop that returns to the same annual planning, the spiral is composed of operating cycles, each of which represents a subsequent annual plan. This open spiral forces CHS performance management to recognise that short-term contracts are only a part of an ongoing process to achieve long-term outcomes.

5.4.2 Extending the Application of the PDCA into an Inter-organisational Relationships (IORs) level

The PDCA is often used for testing changes in a part of the health service delivery process (e.g. Beitsch et al., 2015; Rosati, 2009; Baker et al., 2001), or modelling the work of a dynamic performance measurement system at a corporate level (Bititci et al., 2000). This study applied the PDCA at an IORs level that extends its common application. Figure 5.6 shows the application of the PDCA to performance management of IORs between DHB and NGOs.

Figure 5.6 shows how the PDCA was applied in an IORs setting. However, the original framework also needs to be restructured into the PDI because the assumption that measurement is a separate stage was not borne out by the fieldwork.
Hence, the framework was modified so that measurement was embedded into the three remaining stages.

5.4.3 Dynamic Nature of Stakeholder Rankings

The extensive literature on stakeholder identification and analysis fails to specify how stakeholders of a dynamic process that comprises multiple stages are ranked and whether their ranks are constant in all stages (Neville et al., 2011; Bryson, 2004; Provan and Milward, 2001; Rowley, 1997). Reed et al. (2009) also emphasise the lack of dynamic approaches to identify and engage stakeholders, particularly, in the field of management.

This study addresses this gap. It found that managing the performance of CHS involves changes in the rankings of stakeholders. The changes reflect two issues. First, stakeholders have different levels of interest and influence in the performance of the PDI’s stages. For example, as shown in Figure 5.1, key stakeholders may have greater interest in service planning than in service delivery or improvement. Second, stakeholders also have various levels of interest and influence in different areas of CHS. For example, PHARMAC, which is ranked as a high stakeholder of CPS, is not considered an influential stakeholder in other areas, namely HOP and mental health services.

5.4.4 Integrating Service Improvement into the CHS Purchasing Cycle

Researchers emphasise service planning and service delivery as key stages in managing CHS performance (Shaw et al., 2013; Clark et al., 1995; Bolland and Wilson, 1994b). However, there is a lack of attention to service improvement as an independent stage.

Bolland and Wilson (1994a) configured planning, delivery and administration as three separate faces for coordinating IORs in CHS. This study proposes that improvement is also a distinctive face.

Chapter 2 compared the purchasing cycle which Clark et al. (1995) proposed for purchasing palliative care services with the commissioning cycle that Shaw et al. (2013) devised for purchasing LTC services. This comparison revealed that almost after two decades service improvement has not yet been incorporated in the CHS purchasing cycle. Rather, it is implemented separately in the form of quality improvement projects often designed around the PDCA (Beitsch et al., 2015;
Rosati, 2009). Figure 5.7 shows how this research integrates service improvement (I) into the CHS purchasing cycle.

![Figure 5.7 The Integration of the Service Improvement (I) into the CHS Purchasing Cycle](image)

The PDI aligns service improvement with service planning and service delivery within the CHS purchasing cycle, highlighting that improvement is an integral component of the CHS performance management.

**Summary**

This chapter introduced and explained five components of the PMF identified throughout the research and in the relevant research literature. The five components are associated with three stages of the PDI cycle to produce a patient-centred, multi-stakeholder and spiral framework for contractors’ performance management.

The PDCA was chosen as the platform for developing the conceptual framework which was gradually restructured. The chapter discussed how the PDCA was restructured as PDI cycle, being the three stages of the final PMF. Restructuring the initial conceptual framework produces three findings. First, measurement (C) stage is embedded in the remaining three stages of the PDCA. Second, intermediate processes are separately acknowledged, transferring performance between the PDI’s stages. Third, time is found to be a constraint on implementing all the improvements needed in the current purchasing cycle which led to change the CHS purchasing cycle into a spiral model of open PDIs.

Further to the lessons learned from restructuring the PDCA, the chapter discussed additional insights gained from developing the PMF about performance management in general, and CHS performance management in particular. First, the
PDCA was applied at an IORs level which was different from its common applications. Second, it discussed how stakeholders’ rankings vary depending on the stage of the performance management process and the specific type of CHS. Third, the research integrated service improvement as an independent stage into the CHS purchasing cycle.

The next chapter summarises the results and emphasises contributions of this research.
6 Conclusions

This chapter summarises the results in the light of the research aim and questions. The study's contributions are outlined followed by managerial implications. Next, the research limitations are noted and possible avenues for future research discussed. The chapter ends with some remarks concerning final thoughts on the elements underlying the CHS performance management.

Introduction

This final chapter begins by summarising the results, with respect to the research aim and research questions as set out earlier in section 2.5. It then outlines the contributions made through the construction of a performance management framework (PMF) presented as a three-stage cycle, named Planning-Delivery-Improvement (PDI).

Research aim

The research aim was to identify the required components of a framework that could be used by public purchasers to manage the performance of CHS contractors while taking stakeholders into account. Most studies on health services management focus primarily on performance in clinical services which are provided predominantly inside hospitals (e.g. Wilf-Miron et al., 2008; Wilf-Miron and Shemer, 2004). This study considers performance management of CHS, a topical research area requiring further investigation to identify how to continuously improve services and engage stakeholders appropriately (e.g. Beitsch et al., 2015; Carman, 2007). In the literature reviewed, this study was unable to find any framework which coherently encapsulates the elements required to continuously manage the performance of CHS providers.

To address this gap, a preliminary PMF, conceptualised around the PDCA cycle, was proposed to link stakeholders and contextual factors with a performance management process for the CHS purchasing cycle. The final PMF developed gradually throughout three cycles of action research by restructuring the four-stage PDCA cycle into a three-stage PDI cycle. The final PMF consists of three stages and a set of intermediate processes connecting them. Chapter 5 discussed in detail each stage’s five components (section 5.2) corresponding to the research questions. The results from investigating the three research questions are provided next.
Research questions

In addressing the required elements of the PMF, three research questions were initially posed in Chapter 3. Three components were derived from the literature review namely, stakeholders, critical success factors, performance indicators). As the research progressed, it was realised that two more components were required to complete the PMF. Client’s needs and wants were set to be the focus in each stage of the PDI. In addition, a performance goal was specifically formulated in each stage to support the focus.

An additional component was also identified which was a set of intermediate processes transferring performance between the three stages of the PDI. This sixth component belongs to the whole PMF rather than to individual stages and emphasises the dynamic nature of the framework.

These components respond to the research questions as summarised next. Note that the stakeholder and performance indicators components are included under RQ1 and RQ3.

RQ1: Who are the relevant stakeholders in contracted Community Health Services (CHS) and is there a ranking in terms of interest and influence?

Stakeholder identification, ranking, and grouping. The first component of the PMF addresses the call for engaging stakeholders in managing health services (Porter, 2010; Provan and Milward, 2001; Blumenthal, 1996). This question was answered in a series of steps.

First, the study identified the conspicuous CHS stakeholders through interviewing the participants, service process mapping, reviewing archival documents, and attending health professional forums. Second, through an interest-influence matrix (Reed et al., 2009; Bryson, 2004), a group of managers who had not participated in the data collection scored the interest and influence of identified stakeholders in each stage of the conceptual framework (Figure 3.1). Third, the scored stakeholders were then ranked and key stakeholders were identified to be MOH, DHB, NGO, and Patient and family. Other stakeholders were clustered in accordance with stakeholder groups reported in other studies (e.g. Smith et al., 2008; Provan and Milward, 2001).
The research found that stakeholder ranking is dynamic depending on the PDI’s stage and the area of CHS. Hence, the ranking of individual stakeholders can vary within the PMF. Nevertheless, the four key stakeholders are consistently included in the group of key stakeholders in all stages, although their ranking changes within the group in each stage.

RQ2: What elements or components of performance need to be included in a framework to manage the provision of CHS?

1. **Focus of stage.** An overarching purpose of performance in health systems is predominantly clients or patients who use services (Richards et al., 2015; Blumenthal and McGinnis, 2015; Porter, 2010). Hence, the focus of each stage in the PMF is client’s needs and wants which drives performance management of CHS contractors.

2. **Performance goals.** After the focus of stage, there is a performance goal in each stage. This component acknowledges the need for measuring performance against a goal (Ferreira and Otley, 2009; Otley, 1999).

3. **Critical Success Factors (CSFs).** A set of CSFs is identified in each stage. CSFs are the key areas of performance which require constant monitoring by purchasers to ensure achievement of the performance goal (Eni, 1989; Rockart, 1979).

4. **Intermediate Processes.** A further departure from the initial PDCA was to introduce intermediate processes reflecting transfer points between stages of the PDI. One group of these processes are contracting, evaluation, and intervention which shift the performance between the stages. The other group is interim feedback used to signal when corrections are required.

RQ3: What are the required performance indicators for assessing the performance of CHS providers and their service quality?

- **Performance indicators (PIs).** Each PDI stage has a set of PIs which measure attributes of performance pertaining to each CSF. A PI is either a determinant of performance (ex-ante) or the result of performance (ex-post). Each PI also corresponds to one or two steps of the Donabedian (1966) structure-process-outcome framework.
Contributions

This research aimed to increase understanding of elements constituting performance management of CHS contractors via building a PMF. It makes six contributions to the field of performance management, specifically to performance management of CHS contractors. Figure 6.1 lists these contributions which are discussed next.

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1. **A Multi-stakeholder Framework for Performance Management of CHS Contractors**

Being the aim of the study, a PMF was created for managing the performance of CHS contractors. It comprises Planning, Delivery, and Improvement (PDI) stages which are the result of adjusting the PDCA (Deming, 1986) to the research setting. Hence, the PMF reflects a continuous quality improvement (CQI) approach to the CHS performance management. Two reasons for originally considering the PDCA as an appropriate framework to construct the PMF were extensive attention to continuous improvement of health services and the need for adjustments of responses to constant variation of population health needs (McLees et al., 2015; Shortell et al., 1998; Blumenthal and Kilo, 1998).

The PMF presents performance stakeholders in each stage of the PDI. Engaging stakeholders increases agreement on definitions and goals of performance leading towards better services (Schiller et al., 2013; Porter, 2010; Aarons et al., 2009). The stakeholders are ranked based on their interest and influence in each stage which identifies key stakeholders who are consistently dominant parties across all three stages. This PMF gives purchasers a practical tool for managing CHS contractors’ performance with respect to client’s needs and wants through collaboration with other stakeholders. It also provides performance goals, CSFs and PIs for each stage. While the PIs may not be exhaustive, they provide a reasonably comprehensive set that can be tailored to specific settings.
2. Extending the Application of the PDCA Cycle into an IORs Level

The PDCA cycle is often employed for testing the results of a new procedure for health service provision (e.g. Rosati, 2009), developing projects for public health quality improvement (e.g. Beitsch et al., 2015), or demonstrating dynamic performance measurement systems (e.g. Bititci et al., 2000).

This study extended the application of the PDCA into an IORs setting for managing contractors’ performance. The CHS performance management is an ongoing process and subject to continuous adjustment to the changing conditions of population health. Thus the study contributes by showing how the PDCA can be applied in an IORs setting even though the original framework needed to be modified as discussed next.

3. Adjusting the PDCA to the Ongoing Nature of the CHS Purchasing Process

The initial assumption about the PDCA representing the stages of CHS performance management needed to be revisited by adjusting the PDCA to the ongoing nature of CHS process. The PDCA was thus restructured by introducing the following three changes.

   i. Embedding the Check Stage to the Plan, Do, and Act stages

   Embedding the Check stage, representing performance measurement, in the other three stages of the PDCA led to restructuring it as PDI. The new structure better portrays CHS performance management stages by emphasising that measurement is inseparable from Planning, Delivery, and Improvement and occurs while performance is in progress.

   The PDI stresses a different perspective on dynamic performance management and control systems (Bititci et al., 2000; Anthony, 1988) in which implementation and measurement of performance are simultaneous. This perspective can also shift attention from complete reliance on incremental control mechanisms (e.g. periodic auditing and reporting) to continuous improvement methods for managing performance.

   ii. Distinguishing intermediate processes from the PDI’s stages

   Contracting, evaluation, and intervention are distinguished from three stages of the PDI and introduced as the first set of intermediate processes. These processes transfer performance between stages. Interim feedback is another set
of intermediate processes initiated by service delivery. Some signals may lead to tweaking the current plan for immediate adjustments to service delivery.

This insight caused the second change to the PDCA. It shows that instead of the straight flow of the process from the P to A, there are some linking processes moving forward and backwards between stages.

iii. Expanding the closed process loop into a spiral model

The passage of time restricts how measures can be used to improve selected dimensions of performance within the current purchasing cycle. Cost effectiveness, which is measured based on service outcomes, is one of those dimensions. In some areas of CHS, service outcomes may be revealed gradually over a long period, as opposed to instantly after service delivery. This situation postpones a thorough assessment of performance until long after completion. Also, profound interventions required to improve services only become viable in the next purchasing cycle, rather than as modifications to the performance planned at the start of the current cycle.

Taking the role of time and fixed contract time periods into consideration led to restructuring the closed loop of the PDCA into a spiral model consisting of a series of purchasing cycles. Even though the third change was made to adjust the PDCA to the ongoing nature of the CHS purchasing process, it also suggests that the closed cycle of ‘Management Control in an Operating Organisation’ that Anthony (1988, p.119) devised could be viewed as a series of open cycles. This approach would clarify which improvements are viable only in the next planning cycle.

4. Using Process Maps to Identify Stakeholders

As Schiller et al. (2013) note, due to the lack of systematic methods, identifying health stakeholders is a daunting task. Addressing this gap, the research developed a process map of each service studied to identify stakeholders, constituting a different method for identifying stakeholders of the service process.

Conventionally, stakeholder mapping techniques provide a typology of stakeholders based on specific characteristics or their relationships with a certain issue (Bryson, 2004). Process maps can produce a relatively clearer image of service stakeholders for at least four reasons. Visualising the main and parallel
processes firstly reveals existing linkages which help to identify both dominant and latent stakeholders. These linkages then simplify the task of seeing who deals with which group of activities for serving clients. Meanwhile, these activities to some extent represent the type of resources used by stakeholders. Outlining the linkages also indicates the density of service networks and the centrality of each stakeholder which, according to Rowley (1997), are two criteria for analysing a stakeholder network.

5. Dynamic Nature of Stakeholder Rankings

While the interest-influence matrix is known as a stakeholder mapping technique used to identify stakeholders (Reed et al., 2009; Bryson, 2004), this study used it to rank stakeholders. Chapter 4 presented a matrix for scoring stakeholders identified throughout the study. The scores provided a basis for ranking stakeholders.

The research found that rankings of stakeholders vary in each stage of the performance management process (i.e. PDI) as well as in various areas of the CHS. Therefore, engaging CHS stakeholders is a process-based activity requiring a dynamic approach to properly involve those stakeholders relevant to each stage or service. This finding sheds further light on the dynamic nature of stakeholder rankings which has not been addressed in the extant literature on stakeholder analysis (Neville et al., 2011; Bryson, 2004; Provan and Milward, 2001; Rowley, 1997).

6. Integrating Service Improvement into CHS Performance Management

Service planning and service delivery have been widely considered as the key stages in the CHS process (Shaw et al., 2013; Clark et al., 1995; Bolland and Wilson, 1994b). Prior studies fail to acknowledge service improvement as another key stage. Instead, improvement has usually been regarded as quality improvement projects in the public health sector (Beitsch et al., 2015; Rosati, 2009).

This study integrates service improvement into CHS performance management by introducing the PDI. This integration elevates improvement to the position of planning and delivery stages and thus changes the views on service improvement from segregated projects to a stage of performance management.

The research has several implications for practice as presented next.
Managerial Implications

This research has four implications for purchasers who manage the performance of CHS contractors.

1. Continuous approach to contractors’ performance management

CHS purchasing is an ongoing process that requires adopting continuous approaches to contractor performance management. Health outcomes are often revealed gradually over time, and might also be affected by uncontrollable factors. Furthermore, the passage of time limits opportunities to return to the beginning of the current purchasing cycle and adjust the initial conditions. These two facts extend the mission of performance management beyond the annual purchasing cycles to several years.

This study portrays the continuity of CHS performance management by a spiral model that consists of a series of PDIs, each of which represents an annual purchasing cycle.

2. Dynamic engagement of stakeholders

In addition to the key stakeholders (MOH, DHB, NGO, and Patient and family), purchasers are required to engage with other stakeholders dynamically depending on the level of interest and influence in each stage of the performance management process and area of CHS.

Purchasers can use the PDI to properly engage relevant stakeholders in each stage. However, involving stakeholders in each area of CHS services needs further investigation to classify their interest and influence.

3. Focus on clients and patients in performance management

Despite efforts to promote patient-centred care in New Zealand (Boon, 2012; Boyd et al., 2010), this research discerned that patient involvement in planning is still low. The evidence for this is the low scores that respondents gave to patient and family as stakeholders in the service planning stage (see Figure 4.13).

Regarding the rapid spread of patient-centred care across health systems, managing provider performance needs to concentrate further on improving clients’ experience with services.
4. Extending the domain of accountability to cover clients

While patient-centred care aligns every activity of the health care system with the needs and wants of clients, accountability must also take client feedback into account. In Chapter 4, the generic map of CHS process and accountability indicates how clients’ feedback and experience can be used at higher levels than service delivery to improve strategy and policy.

For example, developing customer relationship management tools can expedite capturing clients’ feedback and converting this to potential improvements. These systems must be designed so that they facilitate direct communication between clients and public health authorities.

Limitations

Despite limitations attributed to qualitative inquiries, the Ph.D. internship in a DHB helped tackle most of the limitations on accessing data. Two contractual parties involved in CHS contracting were successfully recruited and involved in developing the components of the PMF. However, there are still some limitations.

First, the impact of external factors on the CHS performance cycle was treated as an important consideration in the conceptual framework. However, these impacts can take several if not many years to emerge which was beyond the time restrictions of the current research.

Second, some of the pharmacies and home care providers who initially agreed to participate either subsequently refused to participate or withdrew their consent. Hence, the study used ‘cold calling’ to find more pharmacies. This effort increased the sample size, even though not every contact was successful.

The third restriction pertains to investigating only two services among a range of CHS, whereby each service is provided through specialised delivery processes. Nonetheless, the two services are large in terms of expenditure and fairly similar in terms of chronic conditions. They are also large in terms of client numbers.

Fourth, the study experienced some difficulties in convincing the NGOs to provide access to their documents related to the contract with the DHBs.

65 Cold calling, as a sale technique, is defined as the solicitation of business from potential customers who have had no prior contact with the salesperson conducting the call, therefore making the call cold. Available at: http://www.investopedia.com/terms/c/coldcalling.asp [accessed 30 Jan. 16]
Particularly, documents containing quality and performance indicators were often treated as confidential and thus sensitive to the NGOs’ business sustainability. Consequently, these documents were not accessed as part of the fieldwork.

Besides the above limitations, I encountered three challenges. First, managing the literature review was a challenge because of the profusion and depth of literature relating to various dimensions of the studied phenomena. Second, the comprehensiveness of the PMF in terms of ensuring it reflects the essentials of performance management in health services as accurately and usefully as possible. Third, while the accepted design for action research is usually a cyclic structure, there is no standard format to report the findings. Likewise, writing this thesis was demanding since it needed to present many details logically even though they did not always occur in well-defined sequential steps.

The enumerated limitations suggest some directions for future research as outlined in the next section.

**Future Research**

The findings from this exploratory study unveiled several avenues for future research on performance management of CHS contractors.

First, further research is needed to gain insight into the impact of environmental factors on plans and service delivery. Such research could identify appropriate indicators for measuring the agility and thoroughness of adjustments made to prevent or mitigate the impacts of external factors on the performance of contractors and the quality of their services.

Second, a future study could conduct cross-service research over more areas of CHS. A cross-service design would shed light on common problems of managing the performance of contractors providing different services. These findings could potentially increase the applicability of the PMF by including client perceptions of the provider’s performance.

Third, a larger sample of CHS stakeholders would better capture the existing relationships among CHS stakeholders by showing how each stakeholder can affect service quality based on their position in the service network. A network analysis

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66 Action Research Design. What these studies don't tell you? Item number 3. Available at: [http://libguides.usc.edu/writingguide/researchdesigns](http://libguides.usc.edu/writingguide/researchdesigns) [accessed 19 Jul. 16]
would clarify the interactions (linkages) among stakeholders through which they exert influence on the performance of service providers. This could support performance management efforts to enhance service quality and outcomes by identifying divergent expectations and aligning them with agreed goals.

Fourth, further research could determine what information each of the stakeholders require for performance evaluation. In other words, research can relate the information provided by each PI to stakeholders regarding their interests in specific dimensions of performance. For performance management purposes, the use of PIs as attention directing is probably appropriate; the use of PIs as diagnostic is probably appropriate for continuous improvement efforts. The stakeholder groups identified in this thesis should also be useful for developing an inter-organisational system providing the performance information expected by homogenous stakeholders.

Fifth, the inclusion of other service funders such as ACC and insurance companies can be another option for further research. These organisations to a large extent are involved with services for acute injuries, whereas DHBs are the sole planners and purchasers of CHS for chronic or epidemic diseases in New Zealand’s health system. Seeking other funders’ perspectives would extend the diversity of performance indicators, offering more choices to service managers for selecting appropriate measures.

The sixth area of further study relates to the contracting, evaluation, and intervention processes. An investigation could, first, rank the identified stakeholders around these three processes based on their interests and influences. Second, akin to what has been done for the three stages of the PDI, it could define specific performance goals, CSFs and PIs for these processes. For example, defining what is critical to a successful evaluation of quality failures in an LTC service, or what indicates successful implementation of an intervention.

Seventh, to fine-tune the application of the PMF for a wider range of public health practitioners, consensus methods – for instance, the Delphi technique – provide another avenue to advance knowledge of CHS performance indicators. In conducting a Delphi process, a panel of experts from different stakeholder groups could facilitate greater consensus around PIs for the majority of stakeholders.
Eighth, one approach to widely diffuse a CQI mindset is the institutionalisation of quality. According to the Wisconsin Hospital Association, this requires the concept of quality to be integrated into the structure and functioning of the health actors. Institutionalising quality emphasises the culture of continuous quality improvement which is reflected in organisational values and policies advocating quality mindedness. Further study can discover how quality can be institutionalised in the context of CHS contracting to cultivate a culture of CQI among NGOs.

**Concluding Remarks**

Provider performance management involves financial and non-financial aspects, where delivering quality health services and improving the health of communities are of paramount importance to public health authorities. For that reason, public organisations purchasing health services need to underscore the quality of contracted services as a matter of strategic importance and continuously monitor the quality of provided services.

The extent to which a health service purchasing organisation is successful depends on the engagement of clients and non-consumer stakeholders. The purpose of engaging stakeholders is to collaborate on improving the quality of services and to adjusting services to the emergent service needs. Consequently, stakeholders have a mutual understanding of how to make performance excellence a reality. When non-consumer stakeholders have shared objectives aligned with clients’ needs and wants, service plans are clearly communicated to those responsible for implementation. Then work can be better structured to achieve desired outcomes and minimise loss as efforts are supported by other parties. Amongst all the stakeholders, key stakeholders are permanently interested in the performance of CHS contractors, while non-key stakeholders change their level of interest and influence depending on the stage of the performance management process and service type.

Performance measurement is a hallmark of provider performance management. However, the performance indicators will only provide useful information for guiding management decisions and shaping desired behaviour as long as they are

linked to the espoused patient-centred strategy. The results of these measurements must be widely communicated to initiate improvements and facilitate organisational learning. An embracement of the continuous improvement concepts by the entire health system and the accentuation of stakeholders’ engagement are essential to achieving the strategic goals and objectives towards making a healthier population.

The PMF described in this thesis is the result of action research that sought to find the components underlying performance management of CHS contractors. It consists of three stages, named PDI, and a set of intermediate processes connecting these stages. Each stage has five components. The PMF provides a road-map for making a paradigm shift in CHS performance management. It endorses the necessity of dynamic approaches to design a PMF for managing health service contractors. It also advocates learning from experience to avoid the duplication of routines and, instead focus on required and expected services by clients in collaboration with CHS stakeholders.

The development of this PMF sheds some light on future research on CHS performance management. It provides a guideline for those who wish to develop a similar PMF, as it shows a development process considering the completeness and adequacy of a PMF. The PMF can also be applied as an evaluative tool for newly developed PMFs, as a comparison for indicating whether the new PMFs are missing any required components.
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### Appendix 1

Examples of activities in CHS purchasing with regard to the PDCA’s stages (for GD2)

<table>
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<th>Stage</th>
<th>Example in HBSS</th>
<th>Example in Pharmacy</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Plan:</strong> (e.g. strategies &amp; policies…)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Do:</strong> (e.g. implementing strategies as contract…)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Check:</strong> (e.g. controlling and assurance…)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Act:</strong> (e.g. corrective actions…)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix 2

Checklist: initial assessment of current performance management mechanisms for CHS contracts

1. The performance measurement and control system for NGO providers
2. Guidelines for contracting for services
3. The actors (whether in provider or purchaser organisation) who are under assessment [level of assessment: organisation]
4. The providers’ activities under assessment and the most important part of them
5. The methods or tools applied for the performance measurement (both data collection and analysis)
6. The reference of assessed activities to judge for deviations
7. The success indicator of assessed activities
8. The frequency of performance assessment reporting
9. The recipients of performance measurement reports
10. The key stakeholders among recipients.
11. The performance information/individual interest sought by each recipient
12. What is the mission of community health services contracting
Appendix 3

Interview Guide (1): DHB Contract Manager

Place & Date: Interviewee:

The interview focuses on managing contracts with NGOs. Previously, we discussed the objectives in contracting community health services (Lawfulness; Accountability; Openness [transparency]; Value for money [resources are used effectively and efficiently, without waste, and in a way that optimises the public benefit]; Fairness; and Integrity)

1. What are the key responsibilities in contract management?

2. Considering the objectives (above), what aspects of the contract need to be managed (quality, range of services, contractual conditions such as reporting and audit)?

3. How are the priorities (NZ health strategy) implemented in the contract process?

4. What relationship do you have with NGO service providers?

5. Have there been issues in managing past contracts?

6. How could they have been better managed?
Appendix 4

Interview Guide (2): DHB Service managers

Organisation: 
Place & Date: 
Interviewee: 

This study aims to develop a performance management framework which enables managers of contracted community health services to manage/measure performance of their NGO providers based upon strategic objectives and priorities.

One aspect of the study will consider community health stakeholders’ interests in service providers’ performance (NGOs). The interview focuses on interested parties, stakeholders, and their information needs and requirements concerning the NGOs’ performance. (NB Stakeholder is any group or individual who can affect or is affected by the achievement of the organisation’s objectives).

1. How are the priorities (e.g. NZ health strategy) implemented in contract process?

2. What relationship do you have with NGO service providers?

3. Who are affected by the performance of contractors, or in other words who are parties / groups with an interest in the performance of contracts?

4. What do you understand as being performance and where is this set out in terms of your relationship with the interested parties/groups?

5. Are there some who are more or less important groups (as stakeholders), and what criteria do you use to make this distinction?

6. How do you recognise what information each of these interested parties needs?

7. What do these parties/groups use information for; in addition to this what other information might they want about performance?

8. What procedures or reports are in place to satisfy these information wants and needs?

9. What additional information do you need to perform your role and improve management of service provision?
Appendix 5

Interview Guide (3): NGO Service Providers

Organisation:  

Place & Date:  

Interviewee:  

The interview focuses on interested parties, stakeholders, and their information needs and requirements concerning the NGOs’ performance. (Stakeholder: any group or individual who can affect or is affected by the achievement of the organisation’s objectives)

1. What do you understand as being “performance” and where is this set out in terms of your relationship with the DHB (referring to your contract) as the purchaser for your services?

2. What does your internal performance measurement system look like (framework and measures)?

3. Do you have a specific performance measurement system for reporting service delivery against your contract with the DHB (for external accountability)?

4. Regarding stakeholders, who do you see as the parties/groups affected by or interested in your performance?

5. How do you rank your stakeholders and what criteria do you use to make this distinction?

6. How do you know what information each of these interested parties needs?

7. What do these parties/groups use this information for; in addition to this what other information might they want about performance?

8. What procedures or reports are in place to satisfy these information wants and needs?

9. What additional information do you need to perform your role and improve management of service provisions?
Appendix 6

The list of three groups of archival documents

<table>
<thead>
<tr>
<th>General Health Documents</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. DHB Sector Financial Sustainability</td>
<td></td>
</tr>
<tr>
<td>2. 2008 NGO-DHB Contracting Environment</td>
<td></td>
</tr>
<tr>
<td>3. 2013/14 DHB non-financial monitoring framework and performance measures</td>
<td></td>
</tr>
<tr>
<td>4. Health and Disability Services (General) Standard- NZS 8134.0:2008</td>
<td></td>
</tr>
<tr>
<td>5. All District Health Boards – Annual Plan 2011/12</td>
<td></td>
</tr>
<tr>
<td>6. Implementing the New Zealand Health Strategy 2012</td>
<td></td>
</tr>
<tr>
<td>7. Statement of Intent 2012/13 to 2014/15 Ministry of Health</td>
<td></td>
</tr>
<tr>
<td>8. The New Zealand Health Strategy</td>
<td></td>
</tr>
<tr>
<td>10. Performance Measurement Developed by the State Services Commission and The Treasury</td>
<td></td>
</tr>
<tr>
<td>11. Improving Quality (IQ): A Systems Approach for the New Zealand Health and Disability Sector</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Health of Older People (HOP) Documents</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The Northland DHB Health of Older People Strategic Action Plan 2008-2013 (unstudied DHB)</td>
<td></td>
</tr>
<tr>
<td>2. Performance audit report carried out by Office of the Auditor-General</td>
<td></td>
</tr>
<tr>
<td>3. Southern District Health Board: a model of care that integrates health and support services in the community for the older person carried out by Auckland UniServices Limited</td>
<td></td>
</tr>
<tr>
<td>4. Healthy Ageing 2020 developed by the Auckland District Health Board</td>
<td></td>
</tr>
<tr>
<td>5. Role Description of Integrated Services Specialist in a Home Care provider</td>
<td></td>
</tr>
<tr>
<td>6. Home and Community Sector Complaints Categorisation Pilot 2013/2014</td>
<td></td>
</tr>
<tr>
<td>7. Health of Older People Strategy</td>
<td></td>
</tr>
<tr>
<td>9. Needs Assessment and Support Services for Older People</td>
<td></td>
</tr>
<tr>
<td>10. An Agreement between a DHB and a Home Care provider</td>
<td></td>
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<tr>
<td>11. Variation to Agreement between a DHB and a Home care provider</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Community Pharmacy Services (CPS) Documents</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Community Pharmacy Services Agreement (CPSA): Key-Systems Overview</td>
<td></td>
</tr>
<tr>
<td>2. Community Residential Care (CRC) Operational Guideline</td>
<td></td>
</tr>
<tr>
<td>3. Invoicing and Reporting Requirements Community Pharmacy Anticoagulation Management (CPAM) Service</td>
<td></td>
</tr>
<tr>
<td>4. Letter of Consultation on the Revised New Zealand National Pharmacist Services Framework (the NZNPS Framework) by Pharmaceutical Society of New Zealand</td>
<td></td>
</tr>
<tr>
<td>5. Community Pharmacy Services Agreement 2012 Responding to feedback</td>
<td></td>
</tr>
<tr>
<td>6. Recommendations on Community Pharmacy Services Agreement (CPSA)</td>
<td></td>
</tr>
<tr>
<td>7. CPSA 2012 Summary of Changes to the Agreement</td>
<td></td>
</tr>
<tr>
<td>10. Community Pharmacy Services Agreement between a DHB and a Provider</td>
<td></td>
</tr>
<tr>
<td>11. New service model for community pharmacy</td>
<td></td>
</tr>
<tr>
<td>12. Long Term Conditions (LTC) Pharmacy Services Protocol</td>
<td></td>
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<tr>
<td>15. Pharmacy services Standard NZS 8134.7:2010</td>
<td></td>
</tr>
<tr>
<td>16. Pharmacy Quality Audit 4</td>
<td></td>
</tr>
<tr>
<td>17. The Primary Health Care Strategy</td>
<td></td>
</tr>
</tbody>
</table>
Appendix 7

The results of word frequency analysis

7.1 *General Health* documents
7.2 Health of Older People (home care services) documents
7.3 Community Pharmacy Services documents
### Appendix 8

**Individual themes emerged from interviews**

<table>
<thead>
<tr>
<th>1. Contextual factors affecting service delivery and results</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Measuring contract roles on communication and relation</td>
</tr>
<tr>
<td>3. Accountability gaps: same resources to person outcomes</td>
</tr>
<tr>
<td>4. Enabling stakeholders in various steps of service process</td>
</tr>
<tr>
<td>5. CHS performance management is dynamic</td>
</tr>
<tr>
<td>6. Quality of service is assessed by a client</td>
</tr>
<tr>
<td>7. Service efficiency is a trade-off between cost and quality</td>
</tr>
<tr>
<td>8. Service outcomes indicate the effectiveness</td>
</tr>
<tr>
<td>9. Audit quality is to ensure the quality of service tools</td>
</tr>
<tr>
<td>10. Strengthening providers to deliver quality services</td>
</tr>
</tbody>
</table>

(Complete table content is not visible in the image provided.)
Appendix 9

Details of the ALTC Conference 2014 and sessions attended

<table>
<thead>
<tr>
<th>Conference objectives</th>
<th>Purposes of attendance</th>
<th>Attended 30 July 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>❖ Foster collaboration among health professionals</td>
<td>1. Compare the study’s findings with the state-of-the-art knowledge of managing LTC services</td>
<td>Promising paths to providing complex comprehensive care. <strong>Chad Boult</strong> (8.30am - 9.30am)</td>
</tr>
<tr>
<td>❖ Trigger new insights and knowledge sharing</td>
<td>2. Augment the findings from the interviews through knowing more about:</td>
<td>Out of swamps and silos: A new future for health education? <strong>Wendy Horne</strong> (9.30am - 10.00am)</td>
</tr>
<tr>
<td>❖ Develop workforces capable of holistic approaches to health care services &amp; wellbeing</td>
<td>- <em>dimension of LTC services of concern to health professionals?</em></td>
<td>Cardiovascular disease (CVD) Medication health literacy among indigenous peoples: Results of an intervention trial in primary care services. <strong>Sue Crengle and Susan Reid</strong> (10.00am – 10.30 am)</td>
</tr>
<tr>
<td>❖ Strengthen leadership and celebrate effective changes</td>
<td>- <em>The required actions to improve LTC services?</em></td>
<td>Concurrent session 2B and 3B: Person-focused services (11.00am - 1.05pm)</td>
</tr>
<tr>
<td>❖ Raise awareness of optimising the prevention and management of Long Term Conditions (LTC)</td>
<td></td>
<td>Concurrent session 4A: Medication support (1.50pm - 2.45pm)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Long term conditions plenary (2.50pm – 4.00pm)</td>
</tr>
</tbody>
</table>
Appendix 10

Stakeholders Scoring Sheet (for individual scorers and GD3)

<table>
<thead>
<tr>
<th>Stakeholder</th>
<th>Interest</th>
<th>Influence</th>
</tr>
</thead>
<tbody>
<tr>
<td>DHB</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NGOs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patient and family</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GPs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hospitals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MOH (with its divisions and teams)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NZHES</td>
<td></td>
<td></td>
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<tr>
<td>NHSC (Need assessment)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professional associations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CRC &amp; ARCC (Residential care)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Support agencies (e.g. Alzheimer)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PHARMAC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sector services</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Suppliers (e.g. pharmaceutical)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IT Health Board (provide IT supports)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health &amp; Disability Commission</td>
<td></td>
<td></td>
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<tr>
<td>Health Quality &amp; Safety Commission</td>
<td></td>
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<tr>
<td>Office of the Auditor General</td>
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<tr>
<td>PHOs</td>
<td></td>
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<tr>
<td>Intersectorial (WINZ, housing NZ...)</td>
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</tbody>
</table>

Note: Client or Patient, whichever is appropriate

1. Planning (Plan)
   - Setting Quality Goals based on patient's needs and providing needed resources
   - Engaging Stakeholders via collaboration and information sharing

2. Delivery (Do)
   - Integrated Service Quality Management along service provision to fulfill patients needs
   - Communicating Best Practices with providers to achieve quality goals

3. Measurement (Check)
   - Measuring the Effects of services on the "health status" of patients
   - Rewarding high performance
   - Collecting data about required actions for improvement

4. Improvement (Act)
   - Innovative & Intervention initiatives to improve service quality and plan new services
   - Managing Changes to reduce the resilience of providers against changes

Patient's needs and wants

- Communicating Best Practices
- Setting Quality Goals
- Engaging Stakeholders
- Integrated Service Quality Management
- Measuring the Effects of services
- Rewarding high performance
- Collecting data about required actions for improvement
- Innovative & Intervention initiatives to improve service quality and plan new services
- Managing Changes to reduce the resilience of providers against changes

Stakeholder | Interest | Influence |
-------------|----------|-----------|
DHB          |          |           |
NGOs         |          |           |
Patient and family | |           |
GPs          |          |           |
Hospitals    |          |           |
MOH (with its divisions and teams) | |           |
NZHES        |          |           |
NHSC (Need assessment) | |           |
Professional associations | |           |
CRC & ARCC (Residential care) | |           |
Support agencies (e.g. Alzheimer) | |           |
PHARMAC      |          |           |
Sector services |        |           |
Suppliers (e.g. pharmaceutical) | |           |
IT Health Board (provide IT supports) | |           |
Legislatives (law) | |           |
Health & Disability Commission | |           |
Health Quality & Safety Commission | |           |
Office of the Auditor General | |           |
PHOs         |          |           |
Intersectorial (WINZ, housing NZ...) | |           |
**Appendix 11**

NGO Open Day questionnaire

| What is your **Key Quality Measure** for the provided services to your Clients/Patients? |
| Select one measure for **During Delivery (Process)** and one measure for **Post-Delivery (Outcome)** |

| Respondent: |
| Type of provided services: |

| Key **Process** Measure: |
| Key **Outcome** Measure: |
Appendix 12

PDI validation questionnaire (for GD4)

Role of respondent:

Service Planning

Goal: Funding what consumers need within limits

☐ Agree  ☐ Disagree  My suggestion is:……….

Determinants:

Engaging service consumers Indicated by No. of consultations with patients, families and their advocacies.  ☐ Agree  ☐ Disagree  My suggestion is:……….

Population-based needs assessment Indicated by Population health (e.g. QOL measures).

☐ Agree  ☐ Disagree  My suggestion is:……….

Effective goal setting Indicated by Specific, Measureable, Attainable, Realistic, and Time-bound (SMART) Objectives.  ☐ Agree  ☐ Disagree  My suggestion is:……….

Involving key stakeholders Indicated by No. of decisions made by Multidisciplinary Teams (MDTs).  ☐ Agree  ☐ Disagree  My suggestion is:……….

Cost & investment effectiveness Indicated by Value for Money.  ☐ Agree  ☐ Disagree  My suggestion is:……….

Service Delivery

Goal: Providing the best possible service to every single consumer

☐ Agree  ☐ Disagree  My suggestion is:……….

Determinants:

Provider’s capabilities & capacities Indicated by Accreditation/auditing results.  ☐ Agree  ☐ Disagree  My suggestion is:……….

Service efficiency Indicated by Output measures (e.g. No. of clients who completed treatment).  ☐ Agree  ☐ Disagree  My suggestion is:……….

Service quality Indicated by % of satisfied consumers with a provider.  ☐ Agree  ☐ Disagree  My suggestion is:……….

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Service effectiveness **Indicated by** *Outcome measures (e.g. changes in individual well-being status).*  □ Agree  □ Disagree  My suggestion is:………

**Service Improvement**

**Goal:** *Promoting service efficiency, quality, and effectiveness*

□ Agree  □ Disagree  My suggestion is:………

**Determinants:**

Acknowledging high performers **Indicated by** *No. and characteristics of award winning providers.*  □ Agree  □ Disagree  My suggestion is:………

Innovation **Indicated by** *No. of new service initiatives.*  □ Agree  □ Disagree  My suggestion is:………

Consumer education **Indicated by** *No. of self-management initiatives.*  □ Agree  □ Disagree  My suggestion is:………

Provider empowerment **Indicated by** *No. of capacity building initiatives.*  □ Agree  □ Disagree  My suggestion is:………

Safety **Indicated by** *No. of adverse events/effects.*  □ Agree  □ Disagree  My suggestion is:………
Appendix 13

Validators’ votes and suggestions

Legend: Agreed (A), Disagreed (D), No Suggestion (NS)

Service Planning

Goal: Funding what consumers need within limits
3 Agreed, 2 Disagreed

Suggestions for goal:

V.1: (A) Delivering service to consumers with limited resources
V.2: (A) There is continued balance between existing capacity and need. How is need identified?
V.3: (D) – ‘Planning’ is about system design to meet the needs – not just ‘funding.’ Prevention/Health protection and promotion are very important to maintain/achieve ‘wellness.’
V.4: (A) – NS
V.5: (D) – Planning and funding services to increase health of community

Critical Success Factors:

Engaging service consumers Indicated by No. of consultations with patients, families and their advocacies.
4 Agreed, 1 Disagreed

Suggestions for CSFs and PIs:

V.1: (A) – NS
V.2: (A) – But consultation might not be correct term, as it is too soft and we need consumer empowerment, i.e. service users need to be at the centre of service design
V.3: (D) – Inputs don’t necessarily ensure good outcomes
V.4: (A) – NS
V.5: (A) – NS

Population-based needs assessment Indicated by Population health (e.g. QOL measures).
4 Agreed, 1 Disagreed

Suggestions for CSFs and PIs:

V.1: (D) – Improved health plus wellbeing outcomes for the population (e.g. incidents relating to clinical conditions)
V.2: (A) – NS
V.3: (A) – NS
V.4: (A) – Specific need assessment process
V.5: (A) – NS
Effective goal setting Indicated by Specific, Measurable, Attainable, Realistic, and Time-bound (SMART) Objectives.

4 Agreed, 1 Disagreed

Suggestions for CSFs and PIs:

V.1: (D) – A results based journey that measures key health milestones to wellness (e.g. Family history → Leukaemia → Care plan → Review by clinicians → self-management by patient → QOL
V.2: (A) – NS
V.3: (A) – NS
V.4: (A) – NS
V.5: (A) – NS

Involving key stakeholders Indicated by No. of decisions made by Multidisciplinary Teams (MDTs).
1 Agreed, 4 Disagreed

Suggestions for CSFs and PIs:

V.1: (D) – Number of clinical decisions involving patient/Whanau. Care plans and clinical services support self-management and family engagement
V.2: (D) – The community is a very important stakeholder and not in the clinical MDT. Also, we will be managing to measure community (peer) support mechanisms, not in MDT
V.3: (D) – MDTs do not always (and rarely) involve the patient and family
V.4: (D) – Decisions made by clinicians, meetings, focus groups, shared plans and development of teams
V.5: (A) – NS

Cost & investment effectiveness Indicated by Value for Money.
4 Agreed, 1 Disagreed

Suggestions for CSFs and PIs:

V.1: (D) – Relatively of interest that aligns with (i) population profiles, (ii) delivery of services (e.g. primary care, secondary, tertiary) (iii) intensity of need (e.g. Decile ratings)
V.2: (A) – But the resource is more important. We need to consider investment implications through other social entities and their impact on health and service provision.
V.3: (A) – NS
V.4: (A) – NS
V.5: (A) – NS
Goal: Providing the best possible service to every single consumer

Suggestions for CSFs and PIs:

V.1: (A) – NS
V.2: (D) – Equity of service is more important than quality of service and this goal seems to promote equality
V.3: (A) – NS
V.4: (A) – NS
V.5: (A) – NS

Critical Success Factors:

Provider’s capabilities & capacities Indicated by Accreditation/auditing results.

Suggestions for CSFs and PIs:

V.1: (A) – NS
V.2: (A) – NS
V.3: (D) – Depends on what type of audit. A provider can be fantastic in meeting patients’ needs and get still fail in audit measures
V.4: (D) – Good performance against the breadth of contract. Yes, we need accreditation and audit results, but that may just mean we have great admin
V.5: (A) – Plus other indicators

Service efficiency Indicated by Output measures (e.g. No. of clients receive who complete treatment).

Suggestions for CSFs and PIs:

V.1: (A) – NS
V.2: (A) – NS
V.3: (D) – Better to measure the percentage (%) completed as efficiency rather than volumes
V.4: (A) – Increase in inoculation rates. Get well, decrease in an illness presenting with specific conditions
V.5: (A) – Plus others, not just outputs

Service quality Indicated by % of satisfied consumers with a provider.

Suggestions for CSFs and PIs:

V.1: (D) – Milestones of social determinants achieved (independence, economic sustainability, good housing). The degree of self-autonomy. Discharge from services
V.2: (A) – But satisfaction is very biassed
V.3: (A) – NS
V.4: (A) – Also accreditation/certification, number of ‘continuous improvements’ attained during certification
V.5: (D) – Quality is also measured by audit patient day if relating to patient care
Service effectiveness **indicated by** *Outcome measures (e.g. changes in individual well-being status).*

5 Agreed

Suggestions for CSFs and PIs:

V.1: (A) – NS
V.2: (A) – But very hard to measure, sector still in its infancy
V.3: (A) – NS
V.4: (A) – NS
V.5: (A) – NS
Goal: **Promoting service efficiency, quality, and effectiveness**

5 Agreed

Suggestions for CSFs and PIs:

V.1: (A) – …for stakeholder  
V.2: (A) – NS  
V.3: (A) – NS  
V.4: (A) – NS  
V.5: (A) – NS

**Critical Success Factors:**

Acknowledging high performers **Indicated by** *No. and characteristics of award winning providers.*

3 Agreed, 2 Disagreed

Suggestions for CSFs and PIs:

V.1: (A) – NS  
V.2: (A) – Do we know what these are  
V.3: (D) – Customer satisfaction, positive impact (outcomes) for patients, value for money improvements  
V.4: (A) – Caution here though, often awards are derived from self-promotion or application for specific awards  
V.5: (D) – Winning an award is not an indicator of quality. Acknowledgment can have other avenues than awards

**Innovation Indicated by** *No. of new service initiatives.*

3 Agreed, 2 Disagreed

Suggestions for CSFs and PIs:

V.1: (D) – Number of entrants to innovation awards. Enrolment in new service initiatives  
V.2: (A) – Must recognise that failure is not necessarily bad, which we are extremely bad  
V.3: (D) – Innovation is good – but destabilising the system is at risk if you are always trying new things  
V.4: (A) – NS  
V.5: (A) – …however these must be truly innovative and not new services for the save of it

**Consumer education Indicated by** *No. of self-management initiatives.*

3 Agreed, 2 Disagreed

Suggestions for CSFs and PIs:

V.1: (A) – NA  
V.2: (A) – NA  
V.3: (D) – Better to observe evidence of change in behaviour  
V.4: (A) – NA  
V.5: (D) – Number of consumer practising self-management
Provider empowerment Indicated by No. of capacity building initiatives.  
2 Agree, 3 Disagreed

Suggestions for CSFs and PIs:

V.1: (D) – Increased investment in clinical infrastructure. Number of empowerments with Maori development organisations. Attendance at development forums

V.2: (A) and a provider capacity to work with other providers. They need to be mature enough in these approaches to work together for the patient

V.3: (D) – Rather, see improvement in patient outcomes rather than provider-centric capacity growth. Efficiencies to the system that improve outputs while remaining within or below budget perhaps

V.4: (A) – Ability of providers to morph services into current demand areas (as agreed by funders)

V.5: (D) – No of efficiencies in system created

Safety Indicated by No. of adverse events/effects.
4 Agreed

Suggestions for CSFs and PIs:

V.1: Blank – NS

V.2: (A) – NS

V.3: (A) – NS

V.4: (A) – Reduction in the number of adverse events

V.5: (A) – NS

Comments:

V.2: This appears to be a good start but would like more time to consider as I can see a lot of benefits here
Appendix 14

Rank of all stakeholders in the three stages (PDI)

<table>
<thead>
<tr>
<th>Rank</th>
<th>Stakeholders of service Planning (P)</th>
<th>Rank</th>
<th>Stakeholders of service Delivery (D)</th>
<th>Rank</th>
<th>Stakeholders of service Improvement (I)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>MOH</td>
<td>1</td>
<td>DHB</td>
<td>1</td>
<td>DHB</td>
</tr>
<tr>
<td>2</td>
<td>DHB</td>
<td>2</td>
<td>NGOs</td>
<td>2</td>
<td>NGOs</td>
</tr>
<tr>
<td>3</td>
<td>NGOs</td>
<td>3</td>
<td>Patient &amp; family</td>
<td>3</td>
<td>MOH</td>
</tr>
<tr>
<td>4</td>
<td>Patient &amp; family</td>
<td>4</td>
<td>MOH</td>
<td>4</td>
<td>Patient &amp; family</td>
</tr>
<tr>
<td>5</td>
<td>DHBSS</td>
<td>5</td>
<td>NASC</td>
<td>5</td>
<td>IT Health Board</td>
</tr>
<tr>
<td>6</td>
<td>OAG</td>
<td>6</td>
<td>Sector Services</td>
<td>6</td>
<td>HDC</td>
</tr>
<tr>
<td>7</td>
<td>HDC</td>
<td>7</td>
<td>HDC</td>
<td>7</td>
<td>DHBSS</td>
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<tr>
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<td>HQSC</td>
<td>8</td>
<td>OAG</td>
<td>8</td>
<td>HQSC</td>
</tr>
<tr>
<td>9</td>
<td>Professional Assoc.</td>
<td>9</td>
<td>DHBSS</td>
<td>9</td>
<td>OAG</td>
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<tr>
<td>10</td>
<td>PHARMAC</td>
<td>10</td>
<td>HQSC</td>
<td>10</td>
<td>Professional Assoc.</td>
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<td>11</td>
<td>Hospitals</td>
<td>11</td>
<td>Professional Assoc.</td>
<td>11</td>
<td>PHARMAC</td>
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<td>GPs</td>
<td>12</td>
<td>PHARMAC</td>
<td>12</td>
<td>Community Rep.</td>
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<td>13</td>
<td>PHOs</td>
<td>13</td>
<td>Community Rep.</td>
<td>13</td>
<td>Support Agencies</td>
</tr>
<tr>
<td>14</td>
<td>CRC &amp; ARRC</td>
<td>14</td>
<td>Support agencies</td>
<td>14</td>
<td>NASC</td>
</tr>
<tr>
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<td>Community Rep.</td>
<td>15</td>
<td>GPs</td>
<td>15</td>
<td>Sector Services</td>
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<td>16</td>
<td>Support agencies</td>
<td>16</td>
<td>Hospitals</td>
<td>16</td>
<td>GPs</td>
</tr>
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<td>17</td>
<td>NASC</td>
<td>17</td>
<td>PHOs</td>
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<td>PHOs</td>
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<tr>
<td>18</td>
<td>Sector Services</td>
<td>18</td>
<td>CRC &amp; ARRC</td>
<td>18</td>
<td>Hospitals</td>
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<tr>
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<td>Legislatures</td>
<td>19</td>
<td>Legislatures</td>
<td>19</td>
<td>CRC &amp; ARRC</td>
</tr>
<tr>
<td>20</td>
<td>Suppliers</td>
<td>20</td>
<td>IT Health Board</td>
<td>20</td>
<td>Suppliers</td>
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<tr>
<td>21</td>
<td>Intersectoral</td>
<td>21</td>
<td>Intersectoral</td>
<td>21</td>
<td>Legislatures</td>
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<tr>
<td>22</td>
<td>IT Health Board</td>
<td>22</td>
<td>Suppliers</td>
<td>22</td>
<td>Intersectoral plans</td>
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</tbody>
</table>
## Appendix 15

**Interviewees’ codes**

<table>
<thead>
<tr>
<th>Organisation</th>
<th>Managerial role</th>
<th>Interviewee code</th>
<th>Group Discussion (G1D) / Interview (I)</th>
<th>Participant (P) / Respondent (R) / Validation (V)</th>
<th>Took part in Cycle</th>
</tr>
</thead>
<tbody>
<tr>
<td>DHB1</td>
<td>Planning &amp; Funding Dept.</td>
<td>P&amp;F team</td>
<td>GD1 (6 managers)</td>
<td>P</td>
<td>1</td>
</tr>
<tr>
<td>DHB2</td>
<td>Pharmacy</td>
<td>M1.D1</td>
<td>I</td>
<td>P</td>
<td>1</td>
</tr>
<tr>
<td>DHB3</td>
<td>Pharmacy</td>
<td>M1.D3</td>
<td>I</td>
<td>P</td>
<td>2</td>
</tr>
<tr>
<td>Home care provider1</td>
<td>NGO1</td>
<td>I</td>
<td>P</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Home care provider2</td>
<td>NGO2</td>
<td>I</td>
<td>P</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Home care provider3</td>
<td>NGO3</td>
<td>I</td>
<td>P</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Pharmacy1</td>
<td>NGO4</td>
<td>I</td>
<td>P</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Pharmacy2</td>
<td>NGO5</td>
<td>I</td>
<td>P</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Pharmacy3</td>
<td>NGO6</td>
<td>I</td>
<td>P</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Pharmacy4</td>
<td>NGO7</td>
<td>I</td>
<td>P</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Pharmacy5</td>
<td>NGO8</td>
<td>I</td>
<td>P</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Home care provider4</td>
<td>NGO9 (ACC-contractor)</td>
<td>I</td>
<td>R (verifying)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ALTC 2014</td>
<td></td>
<td></td>
<td>Complementary data</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>NGO open day</td>
<td></td>
<td></td>
<td>Complementary data</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Other DHBs</td>
<td>P&amp;F Managers</td>
<td>V (1-5)</td>
<td>GD4 (5 managers)</td>
<td>R (validating)</td>
<td>3</td>
</tr>
</tbody>
</table>
### Appendix 16
Versions of the PMF

**PMF-01**

#### Stakeholders

<table>
<thead>
<tr>
<th>Themes</th>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>1- Quality</td>
<td>Patients' satisfaction level, their expectations vs. experienced services&lt;br&gt;Quality of life: socio-emotional well-being of population&lt;br&gt;Health outcomes of specific services and high needs&lt;br&gt;Adjusted patients needs assessment based on service specification and assessment tools&lt;br&gt;Patient education practices by providers (e.g., pharmacists, nurses...)&lt;br&gt;Funding-related qualities, considering funding and constraints in the quality of services&lt;br&gt;Providers grading as a quality improvement tool&lt;br&gt;Medication and health management plan provided by the providers&lt;br&gt;Medicine synchronisation: reconciliation consistency&lt;br&gt;Drug safety; minimum Adverse Drug Reaction (ADR)&lt;br&gt;Improving health outcomes as per set health targets&lt;br&gt;Technical/physical quality (NZS 8134.0:2008, NZS 8134.7:2010, NZS 8158:2012)&lt;br&gt;In-time service delivery and service recovery&lt;br&gt;Quality certification of the providers&lt;br&gt;Accessibility to health providers&lt;br&gt;Equity and equality&lt;br&gt;Zero-defects service delivery according to health targets and the sector standards&lt;br&gt;Patients' privacy, respect, and confidentiality&lt;br&gt;Engagement of providers in managing health plans&lt;br&gt;Complaints classification and categorisation&lt;br&gt;Friendliness of service environment&lt;br&gt;Adjusting functional quality (human services) to the patients required health outcomes, health targets, and funding models&lt;br&gt;Installing a quality measurement system based on the size of population and needs in every DHB for community-based health services&lt;br&gt;Implementing the quality audit results by the DHBs to improve the performance&lt;br&gt;Clinical auditing to evaluate the quality of service delivery process&lt;br&gt;Addressing providers staff about quality services&lt;br&gt;Quality services are supports to gain well-being and independence from care&lt;br&gt;Quality is perceived as how well a provider responds to patient needs which is diagnosed by a prescriber or any type of need assessors&lt;br&gt;Continues education of providers based on changing population needs</td>
</tr>
<tr>
<td>2- Funding</td>
<td>Efficient and timely contract administration at a DHB level&lt;br&gt;Contract auditing: financial aspects by auditors&lt;br&gt;Financial sustainability: continues quality services within the budgets&lt;br&gt;Demand-driven funding based on accurate need assessment&lt;br&gt;Service specification based on the population needs in the contracting&lt;br&gt;Versatile funding and service models based on changes&lt;br&gt;An independent patients satisfaction survey under the contract&lt;br&gt;Delegating the DHBs an authority to enforce quality issues into contract management&lt;br&gt;Considering PHARMAC decisions in setting up the Expected quality from providers&lt;br&gt;Linking quality audit to the consistent policies, funding models, and contract&lt;br&gt;Demographic and geographic (DHB) adjustment of new contracts and service models</td>
</tr>
</tbody>
</table>
### 3- Accountability

<table>
<thead>
<tr>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fulfiling the contractual reporting requirements</td>
</tr>
<tr>
<td>Timely and accurate reporting based on the contract requirements</td>
</tr>
<tr>
<td>Standardising and synchronising reporting between DHBs (or MOH) and NGOs</td>
</tr>
<tr>
<td>Consulting with the stakeholders about the content of the reports</td>
</tr>
<tr>
<td>Claim and payment control reporting</td>
</tr>
<tr>
<td>Organising meetings, forums, workshops to the accountability process</td>
</tr>
<tr>
<td>Inserting quality measurement results into the accountability structure</td>
</tr>
<tr>
<td>Considering legislations and Official Information Act</td>
</tr>
<tr>
<td>Aggregating similar audits into one single comprehensive audit</td>
</tr>
<tr>
<td>Promoting the result-based accountability (RBA) system to focus on health outcomes</td>
</tr>
</tbody>
</table>

### 4- Communication

<table>
<thead>
<tr>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communicating the ‘health targets’ across the entire system and not only documentations</td>
</tr>
<tr>
<td>Sharing patients information with other involved stakeholders</td>
</tr>
<tr>
<td>Focus on performance improvement instead of only judgmental measurements</td>
</tr>
<tr>
<td>A Dynamic Performance measurement system to signal the troublesome areas</td>
</tr>
<tr>
<td>Comprehensive communication among the stakeholders</td>
</tr>
<tr>
<td>Obliging the stakeholders to use the NHI</td>
</tr>
<tr>
<td>Trust making among the stakeholders through transparency and info exchange</td>
</tr>
<tr>
<td>Educate patients about the Expected Quality</td>
</tr>
<tr>
<td>Balanced performance measurement tools and KPIs according to service specifications</td>
</tr>
<tr>
<td>Measuring quality based on each service specifications and expected outcomes</td>
</tr>
<tr>
<td>Rewarding quality of providers based on the majority of stakeholders satisfaction</td>
</tr>
<tr>
<td>Linking complaint process to the quality measurement</td>
</tr>
<tr>
<td>Developing an IOS to link all the databases in specific services for showing transferred patients to other services as their latest health situation</td>
</tr>
<tr>
<td>Identifying the current data repositories and integrate or merge them to minimise duplication</td>
</tr>
<tr>
<td>Consultation with providers through independent (from funder) service advisors</td>
</tr>
<tr>
<td>Standardising additional services and integrate them into the basic agreements for rewarding and corrective actions</td>
</tr>
<tr>
<td>Making the quality rewards as a means to improvement and learning</td>
</tr>
<tr>
<td>Considering providers’ time to visit additional information and variations after contract</td>
</tr>
<tr>
<td>Execute any change and variation of services and funding models through change management and thus consider win-win for all of the stakeholders benefit</td>
</tr>
<tr>
<td>Networking among the stakeholders of any health service area</td>
</tr>
<tr>
<td>Sending newsletter on weekly, monthly, or quarterly based as per any change</td>
</tr>
<tr>
<td>Operationalising sector standards through guidelines and manuals</td>
</tr>
<tr>
<td>Post-audit follow up via intensive plans to make audit effective</td>
</tr>
<tr>
<td>Guiding and supporting providers into adopting a standardised measurement system which is compatible with quality expectations and accountabilities</td>
</tr>
<tr>
<td>Creating benchmarking platforms to compare performance of providers and promote competition toward higher quality</td>
</tr>
<tr>
<td>Explaining the funding and remuneration procedure to the providers to trust-making</td>
</tr>
<tr>
<td>Avoiding anecdotal assessment of provided services</td>
</tr>
<tr>
<td>Stipulating the Expected quality of service for patients as service clients</td>
</tr>
</tbody>
</table>
PMF-02
• Level 1

1. Plan
- Setting Quality Goals based on patients’ needs and providing needed resources
- Engaging Stakeholders via collaboration and information sharing

2. Delivery
- Integrated Service Quality Management along service provision to fulfil patients needs
- Communicating Best Practices with providers to achieve quality goals

3. Measurement
- Measuring the Effects of services on the “health status” of patients
- Rewarding high performers
- Collecting data about required actions for improvement

4. Improvement
- Innovative & Intervention initiatives to improve service quality and plan new services
- Managing Changes to reduce the resistance of providers against changes

Population needs + Strategic objectives
### Do stage

**Key Elements**

<table>
<thead>
<tr>
<th>Level 2</th>
</tr>
</thead>
</table>

**Activities**

- Managing the Quality of Service Process: accessibility, empathy, reliability, responsiveness, and transparent.
- Dissemination of service quality criteria among stakeholders.
- Balancing the authority, responsibility, and power in performance accountability.
- Transparent accountability: relevant and accountable plus timely and accurate.
- Coaxing funding techniques to increase service efficiencies.
- Considering quality audit results in renewing contract.
- Process & Performance Benchmarking: identifying best practices for a high quality in each service.
- Accrediting service providers based on structure, process, and outcomes.
- Developing Change Management principles and adopting a dynamic approach at all the stages of service provision.

**Two example stakeholders**

<table>
<thead>
<tr>
<th>DHBs</th>
<th>NGOs</th>
<th>DHBs</th>
<th>NGOs</th>
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<tr>
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<td>5</td>
<td>1 to 13</td>
<td>1.3.4.3.11.12</td>
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<td>2.3.4.17.18.19</td>
<td>2.3.4</td>
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<td>4 to 19</td>
<td>12</td>
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<td>5</td>
<td>1</td>
<td>19</td>
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<td>1 to 13</td>
<td>1.3.4.3.11.12</td>
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<td>3.4.11.12.13.15</td>
<td>17.18.19</td>
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<td>3.4.11.12.13.15</td>
<td>17.18.19</td>
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<tr>
<td>5</td>
<td>5</td>
<td>2.3.4</td>
<td>2.3.4</td>
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<td>14 to 19</td>
<td>11.12.13</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>14 to 19</td>
<td>11.12.13</td>
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</tbody>
</table>

**Legend:**

- L = literature
- I = interview
- N/A = not applicable
- NA = not available
PMF-03

**Stakeholders: Plan to Purchase Needed Services (P)**

- **Key Measures:**
  1. % Of Accurate Need Assessment (Risk) and Resource Allocation
  2. # of Multi-disciplinary Teams (MDT)/jointly developed agendas
  3. # of Shared Care Plans (SCP)
  4. % of Goal Attainment for each plan
  5. Worthiness of stakeholder involvement (cost vs. benefit)
  6. Development of Tech-based tools & user-friendly health navigation
  7. Integrity and transparency of Quality Reporting System (QRS)

**Stakeholders: Deliver the purchased Services (D)**

- **Key Measures:**
  1. 258
  2. (Project's objectives)

**Stakeholders: Improve Service Planning and Delivery (I)**

- **Key Measures:**

<table>
<thead>
<tr>
<th>Key Measures</th>
<th>Provision Phase</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Consumer Experience &amp; Perceived Value</td>
<td>Process</td>
<td>Outcome</td>
</tr>
<tr>
<td>2. Safe Practices for Consumer &amp; Staff</td>
<td>Process</td>
<td>Outcome</td>
</tr>
<tr>
<td>2.1. # of Adverse healthcare events (malpractice)</td>
<td>Process</td>
<td>Outcome</td>
</tr>
<tr>
<td>2.2. # of injuries happened to staff</td>
<td>Process</td>
<td>Outcome</td>
</tr>
<tr>
<td>3.1. Quality of Service Facility</td>
<td>Outcome</td>
<td>Outcome</td>
</tr>
<tr>
<td>3.2. Quality of Health Staff: Professionalism, Attitude</td>
<td>Outcome</td>
<td>Outcome</td>
</tr>
<tr>
<td>4. Variations in Consumer Health Status (Created VALUE)</td>
<td>Outcome</td>
<td>Outcome</td>
</tr>
<tr>
<td>4.1. Wellbeing Measure (HRIQOL)</td>
<td>Outcome</td>
<td>Outcome</td>
</tr>
<tr>
<td>4.2. Condition-Specific Measures (Disease-specific)</td>
<td>Outcome</td>
<td>Outcome</td>
</tr>
<tr>
<td>4.3. # of (Readmission to hospital and Occurrence)</td>
<td>Outcome</td>
<td>Outcome</td>
</tr>
<tr>
<td>4.4. Independence level achieved from rehabilitative care</td>
<td>Outcome</td>
<td>Outcome</td>
</tr>
</tbody>
</table>

- **Effect:**
  1. (Project's objectives)

**Feedback/revising plans or projects' goals**:

- Feed-forward/implementation of plans
- Feed-forward/improvement of plans
- Feedback/revising contracts or processes

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PIs of this version are provided in Appendix 12
List of References


Doran, G. T. 1981. There’s a SMART way to write management’s goals and objectives. *Management review*, 70, 35-36.


Harrison, H. 2010. The NGO Sector: Opportunities for reducing administration and compliance costs. Wellington, NZ: Health and Disability NGO Working Group


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