An investigation into the barriers and facilitators to acceptance, and use of Bay Navigator Pathways by general practitioners in the Western Bay of Plenty

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A thesis submitted for the degree of

Master of General Practice

The University of Otago
Dunedin, New Zealand

June 2016
Abstract

Objectives

This project aims to explore reasons for variable uptake of the Bay Navigator Pathways among General Practitioners in the Western Bay of Plenty Primary Healthcare Organisation (PHO). The project aims were to identify barriers and facilitators in the use of the Bay Navigator Pathways and develop recommendations for improving the utility of Bay Navigator Pathways by general practitioner users.

Study design

General practitioners (GP) were purposively sampled to include specific pre-determined criteria in order to cover a range of GP characteristics. GPs were interviewed using semi-structured qualitative interviews. Data saturation was reached after fifteen interviews. Interviews were transcribed in full. A thematic analysis was undertaken, informed by the Diffusion of Innovation Framework (an analytic model used in quality improvement research).

Results

An understanding of the barriers and facilitators that influenced the acceptance and use of the local general practice population was achieved. Unmet and unrealistic expectations from the onset of the Bay Navigator Initiative were identified. Low centrality of the Bay Navigator Pathways hindered the use and acceptance of the Bay Navigator Pathways. Initial and ongoing issues with technology and incompatibility of the different practice management systems were identified as a universal issue between interviewees. However, the trial period for the Bay Navigator Pathways still has a window for opportunity to improve acceptance and use. Lessons learned through this research should be taken into account to assist ongoing development of the Bay Navigator Pathways.
Conclusion

The research showed that general practitioners must exercise an expansive clinical and patient management skill set within the current health system. Adequate support through ongoing education and development of skill should be high on the agenda for Health Workforce New Zealand.

General practitioners should have the ability to triage, investigate, treat and support patients in an effective, cost-effective way. Patients that need secondary care input should have a smooth transit from primary into secondary and again smooth transit of care back into primary with clear treatment plans and goals acceptable to the patient and their whanau. The New Zealand health system should be an entity that people can trust and rely on in time of need.

Innovations like the Bay Navigator Pathways can be valuable tools to achieve these goals. There are no infallible rules when developing and implementing health care initiatives. Knowledge about the specific locally appreciated barriers and facilitators can inform healthcare developments in future.
This research was made possible

with financial support received from

CLINICAL RESEARCH SCHOLARSHIP

Dunedin School of Medicine

2015
Acknowledgements

It would have been impossible for me to complete this research study without the financial support I received in 2015 through the Clinical Research Scholarship awarded by the Dunedin School of Medicine. I hereby express my gratitude to the Board and Faculty for this support.

To my supervisor Assoc Prof Chrystal Jaye: thank you for excellent supervision, support and guidance throughout the project. I experienced your enthusiasm and insights in general practice when I was doing PGDipGP, thereby motivating me to achieve the goal of a Master of General Practice. I am very fortunate to have had you involved in this project.

To my supervisor Prof Tim Stokes: thank you for broadening my view on research aspects. Your constructive criticism motivated me to strive for excellence.

Roger Taylor, Chief Executive Officer of the Western Bay of Plenty Primary Health Organisation and Dr. Caroline Davy, former General Practice liaison and their staff: from the initial brainstorming about the project you were an excellent source of practical guidance and information. I appreciate your support.

I would like to thank the participants, without whom this project would not have been possible. You shared your insights and views with me, giving up your time and expert knowledge. I hope that through this project, healthcare initiatives will improve, making your work environment a safe, rewarding one.

To my employers, colleagues and team at Papamoa Pines Medical Centre: thank you for allowing me three months study leave and carrying my workload in that time. I appreciate your ongoing interest in this project.

To my patients: you taught me so many lessons. You inspired me to want to deliver the best of care and to share my experiences with other general practitioners. I hope that this project will enhance your health journeys – and those of all patients in the Western Bay of Plenty.

To family and friends, in New Zealand and South Africa: your persistent enquiry about the project did help me to get on with it when my motivation ran low. Thank you for your support.
To my children: Marizanne and Carinda, both of you understood and supported me from your university environments with multiple Snapchats and messages to make me continue even when I felt drained. Bernard, thank you for many cups of coffee and for helping out so much around home, more so for being such an independent and reliable student yourself. I am so proud of all of you!

Lastly, to the person that suffered most through my decision to embark on this process. Jaco, you are my idol. You were there throughout every step of this research project – picking up loose ends that fell due to my inattention and being absorbed in the project. Your ideas and reflections on aspects of this project are appreciated, although it might not have been visible at the time. Thank you for walking alongside me through thick and thin.
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<td>Alliance Leadership Teams</td>
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<td>BNP</td>
<td>Bay Navigator Pathways</td>
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<td>BPAC</td>
<td>Best Practice Advocacy Centre</td>
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<tr>
<td>BOP ALT</td>
<td>Bay of Plenty Alliance Leadership Team</td>
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<tr>
<td>CEO</td>
<td>Chief Executive Officer</td>
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<td>CHIP</td>
<td>Clinical health information portal</td>
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<td>CME</td>
<td>Continuous medical education</td>
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<td>COF</td>
<td>Commissioning outcomes framework</td>
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<tr>
<td>COPD</td>
<td>Chronic obstructive pulmonary disease</td>
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<tr>
<td>Éclair</td>
<td>Clinical data repository for diagnostic results and associated patient information</td>
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<td>FTE</td>
<td>Full time equivalents</td>
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<td>GP</td>
<td>General Practitioner</td>
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<td>GPEP</td>
<td>General Practice education program</td>
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<td>GRADE</td>
<td>Grading of Recommendations Assessment, Development and Evaluation</td>
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<td>HSRIC</td>
<td>Health Services Research Information central</td>
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<td>HDC</td>
<td>Health and Disability Commissioner</td>
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<td>HRT</td>
<td>Health Round Table</td>
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<td>IT</td>
<td>Information technology</td>
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<td>IPIF</td>
<td>Integrated performance and incentives framework</td>
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<td>KPI</td>
<td>Key Performance Indicators</td>
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<td>MOM</td>
<td>Map of Medicine</td>
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<td>MOPS</td>
<td>Maintenance of Professional Standards</td>
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<td>NGO</td>
<td>Non-governmental organization</td>
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<td>NHS</td>
<td>National Health Services</td>
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<td>NICE</td>
<td>National Institute for Health and Care Excellence</td>
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<td>NZGG</td>
<td>New Zealand Guideline Group</td>
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<td>PHO</td>
<td>Primary Health Organisation</td>
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<td>PMO</td>
<td>Patient management systems</td>
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<td>PPP</td>
<td>PHO Performance Program</td>
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<td>QOF</td>
<td>Quality and Outcomes Framework</td>
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<td>WBOP PHO</td>
<td>Western Bay of Plenty Primary Health Organisation</td>
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Chapter 1 - Background Information

1.1 Introduction

This thesis explores the take up and use of the Bay Navigator Pathways by general practitioners in the Bay of Plenty region. Bay Navigator Pathways are an initiative of the Western Bay of Plenty PHO to enhance healthcare in the region.

In this chapter, I describe the context of the New Zealand health system, the structural and funding elements before moving to a description of the role that primary health care plays in the health system. A comprehensive description of the Bay Navigator Pathways initiative concludes the chapter.

1.2 The meta-context of the New Zealand health system

The health system is expected to be adequate to deliver good health care for the people in the entirety of the country. The New Zealand population count is 4,612,639. According to the New Zealand medical workforce survey, conducted in 2012, there were 14,686 registered doctors. This number includes both general practitioners (GPs) and specialists at the reported time. New Zealand is a diverse country: there are population dense areas, and areas that are remote and difficult to reach. The population ethnicity distribution is not homogenous in all the areas, causing different health needs. The age distribution curve seems to vary, as well as socio economic status and disability proportions. Growth and possible migration changes in the population should also be kept in mind with predictions on future needs of an area.

1.3 The New Zealand Public Health and Disability Act (2000)

The New Zealand Public health and disability act gives District Health Boards (DHBs) the overall responsibility for assessing need and managing resources and service delivery within their region. There are currently 20 District Health Boards in New Zealand. Each DHB consists of members appointed by the Ministry of Health, and also members publicly elected every three years coinciding with the local government elections. The Ministry of Health funds the DHBs and is the national regulating and monitoring agency. The DHB should take
all variables (mentioned in previous paragraph) into consideration, and use the resources from the Government wisely to meet all the needs in the community. Therefore the focus of different DHB funding will be slightly different, as they individualise the needs in their district to match the available funds from Government.

DHBs should take responsibility for the total health care plan and strategy of the district. This responsibility has a myriad of components: from community based projects to deliver services in the home, to primary care which include general practice and community based health care delivery (for example in schools, sexual health services and aged care), to provincial hospitalisation and tertiary hospital and specialist care.

The Bay of Plenty DHB\(^3\) population estimate for 2014/2015 is 218,020. It serves the community on the coast line from Waihi Beach to Whangaparoa, and the inland border is the Urewera, Kaimai and Mamaku ranges.

![Image of the Bay of Plenty](image)

**Figure 1.1: Geographical boundaries of the Bay of Plenty District Health Board (BOP DHB)**

The BOP DHB is based in Tauranga, with the Tauranga hospital as tertiary hospital. Whakatane hospital delivers health services to patients on the eastern boundary of the district. Medical doctors employed by the BOP DHB as on 31/3/15\(^4\) number 312 full-time equivalents (FTE). This does not include nursing and other allied medical staff. According to the New Zealand Workforce Survey\(^2\), the number of doctors in the BOP DHB per 100,000 population is 244, while the number of GPs per 100,000 population is 90. With renewed emphasis on primary health care\(^6\), people are encouraged to enrol with a general practice or local health clinic. First contact services should be delivered in the community\(^6\). Only patients that need specialised treatment will be referred on to specialist services. The New Zealand Health Strategy 2016\(^7\) continues to highlight the need for treatment closer to home in the primary health sector. The updated strategy\(^7\) also aim to equip and support people to
be informed and involved in their own health, to develop health technology and align health services to achieve across-sector cooperation.

Compared to other DHBs, the population in the Bay of Plenty (BOP) PHO (Primary Healthcare Organization) has a higher percentage of Maori\textsuperscript{3}, but a much smaller Pacific Island population\textsuperscript{3}. Older people are over represented in the BOP\textsuperscript{3}, and the percentage of most deprived people is higher\textsuperscript{3} than in other DHB.

These variables should be considered in allocating funding, but predicted growth and potential threats should also be considered in keeping funds available for emergencies: for both delivery of service and staff required to deliver the required medical services.

PHOs are funded by the DHB to provide the primary health care services in the community. These services are provided by general practitioners. Because general practices may put different emphasis on different aspects of primary health care and serve different demographical proportions of patients with different needs, general practitioners group themselves into PHOs. There are three PHOs in the BOP DHB: the Eastern Bay Primary Healthcare Association, Nga Mataapuna Oranga and the Western Bay of Plenty Primary Health Organization.

Primary Healthcare organizations are not for profit organizations, providing and coordinating essential primary health care to the community - either through direct PHO initiatives, or through general practitioners that are members of the PHO. Primary health care encapsulate maintaining health, preventing ill health, and restoring health. People enrol with a PHO, and are eligible for the discounts and services offered by the PHO for enrolled patients. The GP provider has to provide a service of care to the enrolled population according to the parameters of the PHO. Although general practitioners and patients are encouraged to join a PHO, membership remains voluntary. There are 143,706\textsuperscript{19} patients enrolled with the WBOP PHO.

There are numerous health targets set – both for preventative strategies (like immunization, smoking cessation) as well as for treatment (for example diabetes monitoring) and for screening activities (mammography or cardiovascular risk assessment). These targets are changed and updated as other health needs are identified.
1.4 Western Bay of Plenty PHO

The Western Bay of Plenty PHO became operational on 01 October 2003. The Western Bay of Plenty PHO is a joint venture between Ngai te Rangi, Ngati Ranginui and Providers Inc. Ngai te Rangi and Ngati Ranginui are two local Iwi. Each Iwi has two representatives on the WBOP PHO. Providers Incorporated is an umbrella organization that includes general practitioners, podiatrist, hauora, mental health workers, and other allied health groups. There is an application policy in place for practitioners or health provider groups that feel that they want to be part of the Providers Inc.

1.5 General practice in the Western Bay of Plenty

There are 27 medical practices that are part of the WBOP PHO – stretching from Te Puke, through Papamoa, Mount Maunganui, Welcome Bay, Tauranga, Otumoetai, Bethlehem, Omokoroa, to Katikati and Waihi Beach on the north eastern end. During the initial phase of my research, 181 GPs were associated, in various models of employment, with these practices.

Worldwide the model of general practice has changed and evolved over the last decade or two. Initially, general practices used to be owned by GPs. Currently, one third of GPs are owners or partners of GP practices, and this is the older cohort of GP. Owner GPs either worked full time as solo general practitioners or sometimes worked together in association, sharing the overhead costs. Some practitioners agreed on working in partnership: with pre-arranged sharing of cost and division of profit between the partners.

There are also practices that belong to companies that run the business and employ or contract GPs to deliver the service. Another model of practice involves Trusts that deliver an affordable service to their community. The Trusts usually obtain funding to address a specific health need group. The Trusts then manage a general practice with employed or contracted GPs.

There are GPs that choose to work as employed part time or full time employees to a practice. This model relieves the GP from the initial capital outlay into the business and the management responsibilities of the business. Increasing numbers GPs work part time and flexible hours, which is different to the original model of general practice, where patients always see the same doctor when visiting their general practice. Doctors that contract to
different practices as a locum, either for set hours per week or on an ongoing basis when doctors are on leave, contribute to the mix of employment possibilities. Business models can be a combination of the abovementioned strategies, and adapted to the business owners’ preference.

The general practice associates with a single PHO, and accepts and adheres to the rules and regulations regarding delivery of care as set out by the PHO contract. This assures that the patients get consistent and standardized service. Each practice will have their own flavour and style brought to the mix, but there should not be any deficiencies in care delivery.

Health targets\textsuperscript{110} (see page 3) can have funding incentives associated: meaning that if a general practice does meet the set target, the practice will receive the incentive funding. However, it is impossible to police and set targets for all health needs, and standard of care should be maintained and monitored. A high standard of care can be achieved by the following\textsuperscript{99} (but the list is not exhaustive):

- GPs striving personally for excellence and ongoing medical education;
- Ongoing staff appraisals will identify deficiencies and applaud achievements;
- To motivate medical staff to have registration with vocational bodies like RNZCGP;
- The practice should have policies and procedures in place to set a uniform benchmark for care; and
- Having strategies in place for patients to voice concerns and identify deficiencies in care, both by complaint procedure and informal input and appraisal.

In the preceding sections discussion was focussed on the maintaining of excellence in primary health care delivery. To maintain excellent health care, the PHO set targets to measure practice achievement. Individual general practices have initiatives to service excellence by implementing a combination of the abovementioned actions. The last variable in the cascade of primary health care to be discussed is the influence of the patient.

1.6 Patient expectations

Patient expectations vary considerably. With advances in medicine an “everything is possible” attitude occasionally exists. Availability of health information on the internet influence patient health beliefs. Direct-to-consumer marketing influences patients’ expectations. Keitz, Stechuchak, et al.\textsuperscript{5} found that, when a patient requests a specific
medication or test, deemed unnecessary by the practitioner, then negotiation, explanation and offer of an alternative do not negatively affect the patient experience. In fact it can lead to a more cost effective practice.

Decision making in medical practice (both primary and secondary) is expected to be non-paternalistic, with emphasis heavily on shared decision making and allowing the patient and their whanau to be part of the process.

In the next session, the focus shifts to secondary services and hospital level care, which were previously the principal focus of health care planning. The unsuitability for using secondary services to deliver primary care is emphasized.

### 1.7 Secondary services

Health services are developed around the patient, and not around the institution\(^1\). The onus of diagnosis and formulation of management plan is firmly settled in a primary care setting (page vii of The Primary Health Care Strategy\(^1\)), with emphasis on managing patients closer to home\(^1\). For example, for patients with vague symptoms like tiredness, the general practitioner is responsible for initial investigation and management, then initiating referral to secondary care with specific request towards second tier tests or investigations towards confirmation of diagnosis. This is partly to avoid more expensive secondary care involvement, but also because ongoing management fall back into general practice. Should more than one speciality be involved in the management of the patient (for instance surgery and oncology) then the general practitioner must maintain the continuity of care.

Hospital services can be a more foreign domain to the patient, where the general practitioner and the practice team should be more familiar. Hospital based treatment may possibly medicalize conditions that can be treated with changes in lifestyle and diet, and breed an expectation of “a tablet for every ailment”. The general practice team keep in touch with the patient and the whanau, reiterating the message of healthy lifestyle, or initiate treatment should conservative management fail. Generally patients have to travel further to their local hospital with impact on work (lost productivity and income), school attendance and increased cost for those involved.
1.8 Funding

Cost effective health care is a general aim of the New Zealand health policy makers, but is very hard to achieve. From the patient’s perspective a free or low cost healthcare system is the ideal, but with pressure on Government contribution and increase taxes a sensible median has to be found. Bay of Plenty DHB\(^3\) received $613.2 million in funding in 2014/15, which is a $19.6 million (3.3%) increase on the previous book year.

The DHB has to allocate these funds to have a complete health service to the population. The PHOs are responsible for the primary health care delivery, and general practices claim money for delivery of services per enrolled patient from the PHO. However, realities of running a private enterprise, like a general practice, come with many expenses and patient contribution towards the cost is mandatory. The consultation fee, paid by the patient, has to be within reason, and is capped by the PHO.

However, having health care based in primary care, is predicted to be more cost effective for the tax payers. Therefore the Primary Health Care Strategy\(^{11}\) was accepted by Parliament in February 2001.

1.9 The Primary Health Care Strategy: February 2001

In December 2000 the New Zealand Health Strategy\(^6\) was released by Hon. Annette King, the Minister of Health. From this three strategies were devised:

1. The Primary Health Care Strategy\(^{11}\)
2. The disability strategy
3. The mental health strategy

In her foreword to The Primary Health Care Strategy, Hon. King says: “…the New Zealand Health Strategy for a health system that people can trust, that is there when they need it regardless of their ability to pay, and that really helps reduce the inequalities that exist in health status.”\(^{11}\)

Primary health care became central in improving health and removing inequalities for New Zealanders. Primary health care must be accessible to everybody and the community should be involved in primary health care. Furthermore the emphasis of delivery of care must revolve around the primary health general practice or clinic setting, with first patient contact
in general practice from where referral into the different specialised services can be done if necessary.

The Primary Health Care Strategy aimed to move general practice away from a fees-for-service type approach. Barnett & Barnett and Malcolm et al noticed that areas of greater need had lower GP claims for services and expenditure in pharmaceuticals. This means that higher need populations did not initiate first contact with providers, and thus did not benefit from available services and medication at an early stage of disease. Primary health care needed to be brought to the people in an acceptable and culturally sensitive way. Therefore a population approach was adapted, focusing on improving, maintaining and restoring health by providing adequate funding based on need assessment rather than on contact with provider statistics. Primary health care organisations were formed, as a regulatory platform between DHBs and primary care practitioners. The DHBs could now channel enough money to primary care, with specific aims and responsibilities to primary care providers via the PHOs. The appropriateness of the service delivered can be audited and monitored by PHOs as a gateway for more funding, dependent on performance indicators being met.

Another important element of the primary care health strategy was information to the population: knowing what services are available in the community, and how to access these. Part of this was to keep emergency rooms available for emergencies. The population should use general practitioners as first contact – which will prevent escalation of problems that require secondary services, as well as screen and prevent complications, and provide continuation of care. For people who had difficulty to get to medical facilities, the PHO should have an outreach service that reach people at their homes, workplace, school or marae.

No single practitioner can meet a population’s need completely. Collaboration and team work with other health care professionals and the allocation of services, without doubling up and unnecessarily using resources are part of the PHO responsibilities. This multi-disciplinary approach needs to be negotiated with all the primary care role players involved. To achieve this, medical leadership is an essential attribute of the PHO.

Specific initiatives to coordination of care between primary and secondary are highlighted in The Primary Health Care Strategy (page 19). These include access to secondary care once initial work-up is done, implementing guidelines or tools to aid clinical decision making
across the services and local coordination and cooperation between primary and secondary clinicians.

The abovementioned specific requirements sparked ideas on how to achieve these goals. Out of this brainstorming, the Canterbury Initiative\textsuperscript{13} and similar initiatives like the Bay Navigator Pathways\textsuperscript{18} were born.

Primary health care will need to work in synchronization with public health services, with disability support services and mental health services to maximise patient’s health and outcomes. Fragmentation of services leads to increased cost and patient frustration and insecurity, thus the PHO has to coordinate and link with providers, both within the PHO and outside the PHO, to align service to benefit the patient.

The Primary Health Care Strategy\textsuperscript{11} (page 22) also placed attention on the workforce necessary to deliver the foreseen services: to train, maintain standards and attract suitable workforce to rural and less serviced areas.

Quality improvement and accountability by means of auditing and reporting received attention in the strategy document (page 24). These include formation of a safe, effective infrastructure for information collection and sharing between primary care and Ministry of Health. Needs assessment and effective future planning are some of the mentioned advantages of shared, anonymous data.

\section*{1.10 Better, sooner, more convenient policy\textsuperscript{100}}

As discussed above, the Primary health care strategy paved the way for primary health being central to health care in New Zealand, and also for the formation of PHOs.

In 2009, a new direction in health policy was introduced. The Better, sooner, more convenient\textsuperscript{100} approach to integrated health care delivery places the patient, and not the institution, at the centre of service delivery. The aim of this approach is to have a smooth integration of care between community-based, primary and secondary care, with the focus on managing more patients within the community and primary care settings and closer to their homes. Now DHBs, PHOs and general practices have to work together in alliances to deliver health care to the population within its geographical area. This principle was already set out in the Strategy document\textsuperscript{6} in 2001, but it received renewed attention in 2009\textsuperscript{100}.
The current health minister, Hon. Dr. Jonathan Coleman, had the following message\textsuperscript{20} to all DHBs after he took up office in 2014: “My priorities are ensuring high levels of clinician engagement in the leadership of the health system, increased focus on moving services into the community, and responsible financial management.” He also said: “We need to continue to change the way healthcare is delivered, with more people getting the care they need away from hospitals.”

The ongoing necessity to place primary care at the heart of healthcare delivery, and focus on equality in health care delivery to the entire population, remain the core principles in New Zealand health vision today.

1.11 The Canterbury Initiative

The Canterbury Initiative\textsuperscript{13} was initiated in August 2007 by the General Manager, Planning and Funding for the Canterbury DHB, Carolyn Gullery. She brought together a small team, consisting of representatives from planning and funding, community, primary and secondary care. The aim was to rethink how health care was delivered and how funding was allocated\textsuperscript{13,61,101}.

It took commitment from planning and funding, hospital system and general practitioners to agree to a “whole system” change. The planning and funding arm of the DHB also committed to shift funds from secondary services into the community to enable the process\textsuperscript{14} (slides 33, 36, 40). It was important that everybody realised that there was only ONE bucket of money. This money could be moved around, but there was no additional funding available. All had to work together to rethink how services will be delivered – the best level of care for the least amount of expenditure. Such an approach took away the “them” and “us” mindset between primary and secondary health service delivery.

1.11.1 The modus operandi of the Canterbury Initiative

To achieve the changed mindset of the Canterbury Initiatives\textsuperscript{13}, three elements were agreed on.

1. Leadership and relationship building

   The group brought together by Carolyn Gullary, facilitated clinical workshops to identify areas where change was needed. This process engaged secondary, primary
and allied health groups. These workshops develop health system work streams and projects, and ensure implementation of projects within agreed timelines.

2. Toolbox development

Different initiatives were developed for use by patients, allied health force and primary care physicians. Support was obtained by all the different groups for the development of Health Pathways. These Pathways would be used by general practitioners to manage and refer patients to secondary services. The Pathways were then developed by multidisciplinary teams, and agreed upon by all stakeholders prior to launching the Pathway. The Health Pathways were available on MedTech, and some were incorporated into an electronic referral system. It is foreseen that more will become integrated into the system. The Health Pathways are access restricted to registered users in health professions in Canterbury DHB.

HealthInfo was developed as an easy to use patient health information website. It has general access, with notification that some of the services available are location specific. To achieve flawless interaction between primary and secondary, support for the electronic request management system (eReferrals) and its development were expressed. Community requested radiology referrals and dietitian referrals were coordinated and launched.

3. Education

It was imperative that good dissemination of knowledge of the system would be necessary. Education was done by workshops – either in large group or small group format. Dates for upcoming events were made readily available in advance on the webpage. Video recordings of each education session were made available on the education page to view at later convenience. Remote areas were incorporated by video-conference in the education sessions.

The Canterbury Initiatives was a groundbreaking movement. Initial successes in patient management, decreased hospital waiting times and smoother interface between primary and secondary, fuelled by the monitory savings, drew other DHB’s interest.
1.12 The Bay of Plenty Initiative

A PHO Alliance meeting, attended by representatives from WBOP PHO, brought the revolutionary Canterbury Initiatives and the positive spinoffs achieved, to the attention of the WBOP PHO. In early 2011 Dr. John Gemming (Co-chair WBOP PHO) and Roger Taylor (CEO WBOP PHO) arranged a seminar in Tauranga and invited a group of people involved with the Canterbury Initiatives to the meeting.¹⁵ This seminar was attended by a wide range of clinicians, some administrators, and allied health professionals. According to Dr. Gemming (video footage¹⁵) a sense of enthusiasm was created, and the “Bay of Plenty Initiatives” was launched. In a nutshell, the catch phrase for the movement was “One system, one budget, and all working together”. It was to rethink in which sector services were best provided, and which level practitioner could best provide the services to the patients – in a most cost effective and sustainable manner.

Out of this initial seminar and the work that followed from there, the strategy was renamed Bay Navigator. The name derived from the meaning of “Navigator”, which is the skill or process of plotting a route. This name encompassed the mindset of the movement.

According to Roger Taylor (CEO WBOP PHO), the rationale for launching¹⁶ the Bay Navigator was to create a platform that could lead to whole sector cooperation, where good work relationships could develop between primary and secondary care providers. The Bay Navigator process would lead to workforce development, as some services might transfer to be delivered by primary care staff. Such a shift would enhance the skills and expertise of this previously underutilized workforce. An example is to have a pathway for GPs to request CT scans, shortening the waiting time for patients to first see a specialist for these tests, but also sometimes making it unnecessary to see a specialist. GP requests leave more specialist hours available for doing specialised tasks. Thereby the costs involved with the delivery of services should be lower. Hereby more money could be channelled into primary care with bigger advantage to more patients. To support this evolving process, information technology had to develop to deliver the necessary structures for service delivery and communication between sectors.

Other participants on the Bay Navigator “About us” video¹⁵ express various elements of the initiative:
Integrating those clinical guidelines with the actual resources in the community to provide a one stop shop for clinicians to, not only be guided for proper clinical steps, but also how about accomplishing it in the Bay of Plenty (Dr. Matt Valentine, Clinical lead ED and Medical lead, Whakatane hospital).

Bay Navigator is...it’s been a collaboration from all the stake holders in the team that provides health services (Mike Agnew, Senior Portfolio manager, Planning and Funding, WBOP DHB).

There are hundreds of different resources that are internationally recognized as being very well evidence based that doctors can already look at. But the fact is that we don’t look at them at a regular basis because they are not tailored to the environment that we work in. And so if you got something that not only tells you the best way of managing a certain condition but tells you how that condition can be managed within your own locality, then that has a greater degree of relevance. We are all so busy, that there are only a few opportunities in a day to be able to look things up anyway, and so you want to make sure that the tool you are using can give you as much information, relevant to where you are working, in one go, rather than going off and seeking lots of different resources (Dr. Joe Bourne, GP liaison).

Bay Navigator\(^ {21}\) by definition is an initiative that brought together community and hospital-based health care professionals. It encompassed a paradigm shift on care delivery, moving care from the hospital sector into the community setting. Placing the patient in the centre of care delivery had an influence on service design. To map out the new care delivery model, Bay Navigator Pathways were developed to deliver healthcare that is more convenient for the patient. To fund this community based care initiative, resources and staff had to move to the primary sector. This was, and is, a challenging process, and ongoing communication and collaboration between the health team and funders are paramount.

Prior to the development of the Bay Navigator initiative, there was some interaction between the DHB provider, PHOs and NGOs, but the Bay Navigator Pathways was the first project where an overarching governance structure across these entities became a reality.

The Bay Navigator Governance group comprised of representative and expert members. Representative members partook on behalf of the three PHOs and the BOPDHB, while expert members were responsible for delivery of clinical guidance. The Governance Group was responsible for the development and implementation of the Bay Navigator process.\(^ {17}\)

To prioritise the most essential conditions for which pathways had to be developed, stakeholders were requested to supply the Governance group with a mandate form. The mandate form was to bring a specific health topic where management deficiencies were
experienced under the attention of the Governance Group. The mandate form had to explain the impact of the condition on the community. It also had to highlight why improved outcomes for patients suffering from this condition, was necessary. The specific shortfalls in equirable care to all ethnicities had to be addressed.

The Governance Group used a prioritisation tool to consider the potential benefit versus the foreseen effort to bring about change. By using the prioritisation tool, they could rank conditions and prioritise the development of the proposed pathway.\textsuperscript{16, 17}

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{benefit-versus-effort-chart.png}
\caption{Benefit versus effort}
\end{figure}
Once the condition for which a Pathway was to be developed was identified, interest from primary care (GPs, community nursing, podiatry, and patient advocates groups), secondary care (head of departments) and consumer groups were requested by email. As soon as the GP liaison had sufficient interest from all parties, an initial meeting was set up. The GP liaison was pivotal in the organisational aspect of the initial process. Pathway groups were led by a hospital-based and a community-based clinician. An honorarium was offered to each attendee, according to their skill level, for partaking and contributing in the process. If, through the development process, it was identified that there were missing links (people with specific knowledge or skills who were not currently involved), these people were contacted and requested to join the development process.

The process started by reviewing the current practice and comparing it to an ideal. The emphasis was that the service should be more efficient and timely. The vision was also to have easier access for the patients to the service, and that patients should have an improved experience in using the service.

Over several weeks the development team would meet and discuss the pathway in development, drawing on current best practice guidelines (for example, UK’s National Institute for Health and Care Excellence – NICE – guidelines) and learning from experiences in other areas (for example in the Map of Medicine or the Canterbury Initiatives) as well taking into account the realities of the WBOP population and services available. Service restructuring and transferred health funding or resource shifting as part of the pathway development was possible to ensure that patients were treated effectively in an appropriate setting by health care professionals with the necessary skill set.

The developed pathway would be trialled and any difficulties ironed out, prior to an education meeting. Meeting times and venue would be announced to GPs, practice nurses, community pharmacists and other primary care health professionals, to attend. The announcement of the meeting would be approximately three or four weeks prior to the proposed date. Advertisement of the meeting was done through the Bay Navigator Newsletter, emailed to practices and individual doctors, but also through email from the WBOP PHO. The clinicians responsible for the pathway would present their work and inform the attendees about the changes in the referral process. They would also inform about new services that were available as a result of the pathway development – what the services
would do, what the criteria for referral to these services were and how to do the referral to these services.

Service specific referral forms were developed in some cases as part of the redesign process. These referral forms were made known to the attendees and information about how to access and complete these forms electronically were demonstrated.

**Bay Navigator initiatives:**

1. **Pathways:** To date in September 2015, there were forty-four pathways\(^{21}\), from fifteen services, on the website. These pathways were developed by interprofessional teams. It is presented as a flow diagram, with some information behind the “boxes”, which can be opened by clicking on the box. Some of the pathways are integrated in a referral template and are listed as such on the electronic referral system (eReferrals, a Best Practice initiative). There are mainly three medical computer process packages used in the WBOP PHO: MedTech, Profile or My Practice. Due to the variety in compatibility, the electronic referral systems pose issues for many general practitioners. Pathways recommend investigation, management and support systems based in the community. It incorporates numerous primary care based practitioners and programmes in managing the patient and supporting the whanau. A pathway has “red flags” or circumstances in which management in the community will be unwise, with the general practitioner referring to the hospital on the basis of these “red flags” pointed out in a written referral letter.

2. **Information resources:** Thirty-five services were listed alphabetically on the Bay Navigator Website in September 2015. The information resources open into various topics about that service, including general and area specific information documents. Some of these documents are general information about a service (like Kathleen Kilgour oncology centre), while other documents has New Zealand guidelines (for example Management of chronic kidney disease in general practice).

3. **Referral and advice:** Thirty-four specialist services listed alphabetically. Some medical conditions do not have referral pathways, but specialists have accumulated their advice on topics. The section contains specific advice on referrals for suspected cancer – what to include in referral letters and how to flag these referrals. The acute
referral telephone numbers for Tauranga and Whakatane hospital also appear in this section.

4. Patient education: Thirty-four specialist services listed alphabetically. Each service recommends a number of information sheets or websites for patients to navigate and get information about their health condition. This section also includes shared decision making tools for example chronic obstructive pulmonary disease (COPD) management plans and asthma management plans, as well as palliative care plans.

5. Elective services: Twenty-three specialist services give indication of what conditions are likely not to be seen when referred. It also include access criteria and approximate waiting times.

6. Professional development: supplies links to professional development providers and e-learning websites.

The Bay Navigator Initiatives are available on The Bay Navigator website. This is an open website with no password requirement. The Bay Navigator website was initially developed in 2011. With the speed of advances in technology and the expansion of Bay Navigator initiatives, the initial website became impractical and archaic. The redesigned 2015 website is an effort to make the Bay Navigator website user friendly and deliver a local applicable service at speed to users. See: baynav.bopdhb.govt.nz.

1.13 Evaluating the acceptability and use of the Bay Navigator Pathways to date

In 2013 Dr. Carolyn Davy, GP liaison, completed the Success Report mainly to evaluate outcomes of pathways completed and in use at that stage. The evaluation process included nine pathways developed between 12 April 2011 and 22 January 2013. She reported that the pathway developing teams worked efficiently and completed pathways in a timely manner. She also reported that service redesign took place. Services were relocated back into the community moving away from having services hospital based. To achieve community based services, funding had to follow, allocating more funding to be used in primary care.

Each developed Pathway had an assigned set of Key Performance Indicators (KPIs) suggested by the development team. Dr. Davy tried to use these suggested KPIs when she had to
compile the Success Report\textsuperscript{17}. These KPIs proved to be varied and unhelpful in measuring outcomes. She experienced difficulty in obtaining the required information necessary to review the pathway. It proved to be impossible to measure the impact of the pathway. The Success report\textsuperscript{17} used non-specific data like websites hits as a measure of use of the pathways. Indirect patient-admissions data was used for some pathways to confirm utility. Improvement in referral adequacy and ratio of accepted referrals failed to show a difference for cardiology pathways. However, gastroenterologist Dr. Adrian Claydon was quoted being positive about the Suspected bowel cancer eReferral medical template: “….much quicker to grade to template. The real time saving will be if we can get specialist nurse to do the grading” (Success Report\textsuperscript{17} page 18). Decreased length of hospital stay, reduced rate of on-the-day surgery cancellations, reduced waiting time and improved patient satisfaction indicators were all positive outcomes on the review of the Direct Laparoscopic Cholecystectomy pathway. Similar good patient satisfaction percentages (from 86% to 91% of patients giving an excellent grading) of the Orthopaedic Knee and Hip Joint surgery pathway were positive aspects of the Success Report. The Dementia Pathway was newly introduced at the time that the Success Report\textsuperscript{17} was compiled. The number of hits on the Dementia Pathway was remarkable (see Table overleaf), and might have indicated a huge need by GPs for direction and support in correctly managing uncomplicated dementia in the community.

The Governance group was replaced by the Bay Navigator Action Group, which has representation from the three PHOs, the BOPDHB and primary care. Responsibilities towards different Primary Care initiatives were delegated. The Bay Navigator Action Group has to prioritise projects and follow its progress. The Bay of Plenty Alliance leadership team (BOPALT)\textsuperscript{18} oversees the work of the Bay Navigator and all the initiatives stemming from the Bay Navigator. Discussion of the wider Bay Navigator initiative follows in the next section.

The Bay of Plenty Alliance leadership team collates a monthly report using the amount of hits on the various elements on the website as an indirect measure to use of the Bay Navigator services. The following graph includes the statistics of website hits since January 2015 to October 2015.
Figure 1.3: Website hits of Bay Navigator Initiatives for Jan–Oct 2015

Individual pathway use data are also available, with numbers corresponding to anonymous internet user data. The pathway with the most views over the last five months is the Uncomplicated Dementia Pathway with 101 views in October 2015.

Table 1.1: Dementia Pathway views for the months June – October 2015

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Dementia Pathway</td>
<td>33</td>
<td>103</td>
<td>137</td>
<td>99</td>
<td>101</td>
</tr>
</tbody>
</table>

To audit the use of the Bay Navigator Pathways by means of indirect website use is not sufficient. It is impossible to know if it was a health professional accessing the site, or somebody surfing the net that happened to click on it. There are also serious discrepancies in the numbers, for example in October 2015, 674 hits were recorded for the Pathways link, with then the following number of specific pathways accessed:
Table 1.2: Number of web hits per Pathway

<table>
<thead>
<tr>
<th>Pathway</th>
<th>Hits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cardiology: adult heart murmur pathway</td>
<td>28</td>
</tr>
<tr>
<td>Child health: skin sepsis pathway</td>
<td>24</td>
</tr>
<tr>
<td>ENT: sore throat management pathway</td>
<td>28</td>
</tr>
<tr>
<td>Gastroenterology: colorectal cancer pathway</td>
<td>26</td>
</tr>
<tr>
<td>Health in Ageing: TIA pathway</td>
<td>29</td>
</tr>
<tr>
<td>Health in Ageing: Uncomplicated dementia pathway</td>
<td>101</td>
</tr>
<tr>
<td>Infectious diseases: Recurrent skin sepsis pathway</td>
<td>33</td>
</tr>
<tr>
<td>Obstetrics &amp; Gynaecology: menorrhagia pathway</td>
<td>27</td>
</tr>
<tr>
<td>Orthopaedics: Fragility fractures pathway</td>
<td>41</td>
</tr>
<tr>
<td>Palliative care: Palliative care pathway</td>
<td>29</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>366</strong></td>
</tr>
</tbody>
</table>

This leaves 308 hits unaccounted for. Can this be the amount of net surfers accessing the site, or users that got distracted and could not finish their use of a pathway, or maybe just somebody confirming that they can find the site without issues? These aspects of the BNP will be revisited in the Discussion chapter.

1.14 An investigation into the barriers and facilitators of acceptance, and use of Bay Navigator Pathways by general Practitioners in the Western Bay of Plenty.

General practice research is a much underutilized source of knowledge. The reasoning behind the development of the Bay Navigator Pathways is clear, but there is no information about the Bay Navigator Pathways and how it fits into the daily world of work for the general practitioner.

The questions that inspired this research project are:

- What do the GPs know and think about the Bay Navigator Pathways?
- How does the existence of the Bay Navigator Pathways affect their everyday work? From the general practitioner’s viewpoint: what is the effect of the Bay Navigator Pathways on their patients and how does Bay Navigator Pathways influence their interaction with secondary services?
- What are the things that make it difficult, and on the contrary make it easy, for General Practitioners to use the Bay Navigator Pathways?
To what degree did the General Practitioners in the Western Bay of Plenty integrate the Bay Navigator Pathways into their daily routines?

This research study set out to get answers on the abovementioned questions from a general practice viewpoint.

1.15 Conclusion

This chapter included a review of the New Zealand health system, the Government policies in place to regulate it and the governance bodies involved. The shift in mindset to put primary care as central in health delivery lead to changes in the cooperation between primary and secondary services, and the resulted pressure on funding to achieve the goals set out by the New Zealand Health and Disability Act (2000)\textsuperscript{12}. The courageous example set by the Canterbury Initiative to overcome the burning issues, was discussed. The formation of the Bay Navigator Pathways and the unfolding story thereof concluded this chapter.

To further inform the research, a wide literature search was conducted. The next chapter provides a review of the relevant information gained through this process.
Chapter 2 - Literature Review

In this chapter current literature will be reviewed to inform the research, but also to enhance the project by bringing to light deficiencies in current knowledge or New Zealand applicability.

There are various terms used to describe the concepts of health pathways. There was no consistent definition found in the literature. Therefore, this chapter will start off with some definitions found in the literature, and how these definitions can be made applicable to the Bay Navigator Pathways. Possible reasons why pathway development happened will follow. The literature on factors that can affect acceptance and use of Bay Navigator Pathways is also reviewed. The factors discussed include the pathway, general practitioners, the patient and secondary care related issues.

Characteristics of the innovation, the Bay Navigator Pathways (BNP), may influence the research project. This chapter conclude with a section on implementation of innovation and sustainment of innovation.

2.1 Defining pathways

In research, multiple names can be used to describe similar things. These words are not necessarily synonyms, each word or term does imply slight differences in nuance. If the reader does not take this into account, misnaming can cause confusion. Ensuring that the definition set by the researchers was understood by participants made it easier to compare similar research studies. Kinsman\(^88\) wrote: “This lack of a uniformly accepted definition of what constitutes a clinical pathway impacts on capacity to empirically test the evidence base and compromises planning, resourcing, development and implementation of clinical pathways.”

Clinical guidelines are evidence based best management for specific conditions. Clinical guidelines should have a level of evidence reference in the manuscript. Generally, clinical guidelines do not take into account cost constraints or delivery constraints. They are, in my view, the ideal treatment for a condition if there were no co-morbidities that may influence treatment options, and no care delivery constraints. Carlson\(^23\) however, did add equity of health care and cost constraints as a new dimension to his definition of clinical guidelines.
The reality of delivering top-notch clinical care in a cost effective way, put a slightly altered nuance in the term clinical practice guidelines. Clinical practice guidelines have become a common tool for promoting quality and equity of services, and controlling costs.

National and International guideline groups are constantly reviewing and revising current clinical guidelines as new research becomes known. Guidelines from respected guideline groups, for example the National Institute for Health and Care Excellence (NICE) and the Health Services Research Information Central (HSRIC), are, in this day and age, easily accessible through the internet. The NZ Guidelines Group (NZGG) unfortunately went into liquidation in mid 2012. Best Practice Advocacy Centre (BPAC$^{NZ}$) is now working towards recognition as the developer of national New Zealand Guidelines. According to an agreement between NICE and BPAC$^{NZ}$, launched in March 2015, BPAC$^{NZ}$ will convene expert working groups to contextualise current NICE guidelines, which, once reviewed, will be made available to the New Zealand Health Sector. In my view clinical guidelines tend to have a more national and international flavour, not taking realities of population dynamics and availability of expertise and technology into account. As discussed earlier in the meta-context of health in New Zealand (Chapter 1), the needs and requirements of the population in New Zealand are not uniform.

Bringing clinical practice guidelines into synchronisation with location and community, my preference is to use the term clinical pathways. This is because clinical pathways, in my view, describe the process of developing clinical guidelines that are community focussed, appropriate for the services available, the strengths and weaknesses of the community and primary and secondary services. De Allegri et al$^{24}$ shares this view, and define clinical pathways as structured, multidisciplinary longitudinal care plans, describing all desired diagnostic and treatment steps to ensure continuity and coordination of care. Feder et al$^{25}$ disagree, still using the term clinical guidelines, but his notion is that a group can adapt the clinical guidelines for local requirements, and then present and use the clinical guideline within the local setting and its service. I feel that this may cause confusion as well as medico-legal pitfalls, as the “changed” version might be mistaken for the original copy by users that are not familiar with the changes made. As far a copyright and the issue of intellectual property, I feel that it may be risky to adapt highly regarded clinical guidelines and present an adapted version without clarification.
Another term found in the literature, is “Integrated care pathways”.\textsuperscript{26} The definition given to integrated care pathways by Campbell et al\textsuperscript{26} is:

Integrated care pathways are structured multidisciplinary care plans which detail essential steps in the care of patients with a specific clinical problem. They have been proposed as a way of encouraging the translation of national guidelines into local protocols and their subsequent application to clinical practice. They are also a means of improving practice.

As mentioned above, this definition is very similar to my own definition of clinical pathways. Improving clinical practice is implied when using a clinical pathway, but practice improvement is not integrated in the definition. Having improved practice as part of the notion of integrated care pathways, may make the term integrated care pathways a slightly broader term compared to clinical pathways. Fox\textsuperscript{59}, working in a secondary care milieu, defines Integrated Care Pathways more in terms of treatment protocols, with medical records and clinical guidelines combined in a sequenced pro forma style document. Closer to home, Kenealy\textsuperscript{60}, talking about the Canterbury Health Pathways, also calls the Health Pathways “integrated care”. Kenealy stressed that patient care is central, and care is coordinated as described in the Health Pathways regarding the place, time and provider that deliver care. The centrality of the patient in service delivery is an important element of clinical pathways.

Similarly Faber et al\textsuperscript{72} describe Coordinated Care Pathways as having a multidisciplinary secondary care focus – where guidelines are put into a flowchart that highlight the care of the patient, with timeframes when certain tests and procedures should be completed. There are again overlapping nuances with Clinical Pathways. In my view, Clinical Pathways are the primary care arm of a Coordinated Care Pathway – indicating a smooth transfer of care from primary level investigation to secondary level investigations. Coordinated Care Pathways assume that there must be secondary treatment pathways, which falls outside the scope of general practice.

\section*{2.2 Practice improvement and clinical pathways}

As mentioned before, clinical pathways empower the GP to manage the patient more holistically within the primary care setting. Should referral be necessary, the appropriate use of local available services is assessable and investigations are completed in primary care. Practice improvement activities, for example audit, are part of the ongoing practice
evaluation. The practice or general practitioner can audit their own practice, measuring for example workup adequacy according to clinical pathway recommendations. Sutcliffe et al discuss the relationship between guidelines and measured quality and outcomes. NICE was involved in the process of developing improvement indicators for the Quality and Outcomes Framework (QOF), as well as reviewing QOF indicators that was in use. Family Practices in the UK were paid according to an incentive scale if they reached the individual indicators. Since 2012 this process changed when the NHS decided to focus more on health outcomes. The national outcomes goal was to be reported through the Commissioning Outcomes Framework (COF). It was envisaged that NICE would continue to have a key role through the publication of Quality standards as well as developing more outcome-focussed guidelines. In New Zealand, the Integrated Performance and Incentives Framework (IPIF) came into effect on 1 July 2014. IPIF is an attempt to integrate healthcare systems, moving away from compartmentalising performance indicators in each health sector. The goals of IPIF are improving quality of care and the accessibility of care for patient, as well as the integration of healthcare. These goals partially overlap with the goals of Bay Navigator Pathways, as discussed in the previous chapter. As Pathways are conceptually different to the IPIF indicators, Pathways are currently not directly comparable to IPIF. There are no technical connection between Bay Navigator Pathways and IPIF. Appropriate healthcare for all patients are embedded in patient centred care, rather than demanded by IPIF.

Pope stresses that perspective is an important factor when debating quality of care: patients, providers, politicians and the public may all have contested views of the quality of care.

2.3 Why are clinical pathways necessary?

The answer to this question is found in the definition of clinical pathways, as defined by Queensland Clinical Pathways Board: “Clinical pathways are standardised, evidence-based multidisciplinary management plans, which identify an appropriate sequence of clinical interventions, timeframes, milestones and expected outcomes for an homogenous patient group.” My interpretation of “homogenous patient” is that it is the same as the “typical patient” as per the GRADE system. In the following section, I discuss the elements of clinical pathways.
1. Clinical pathways give structure and uniformity to care between different providers. Health consumers may have the preconception that medicine is an uniform science\textsuperscript{28}. This belief may have originated in the foundation of medicine, which is a shared theoretical knowledge of medicine. Theoretical knowledge has to be made applicable to clinical cases and different patient characteristics, which can leave a third party with the assumption that there is variation in care. De Jongh et al\textsuperscript{28} tested the hypothesis that guidelines would create uniformity and reduce variation in medical care, but interestingly, failed to prove the hypothesis. One can therefore argue that pathways may not worth further exploration. However, a recent (2015) New Zealand study on Health Pathways by McGeogh\textsuperscript{62} with 249 general practitioners across the Canterbury participating, showed that 85\% of hospital clinicians felt that patients in primary care were managed better using the Health Pathways. It also showed a positive impact on transparency and standardization of referrals, and secondary triage improved since introduction of Health Pathways. This, for me, equates to uniformity in health care.

2. Clinical Pathways keep doctors up to date with new developments: Grol\textsuperscript{54} argues that Pathways are an important way for new medical research evidence to reach practice. The volume of new research in medicine that doctors have to take note of, and even more important, implement into their daily work, is huge. Pathways are an effective way to make this new knowledge ready for implementation. Alternative ways include reading journals, attending CME or conferences, which all contribute but are less practice orientated ways of gaining new knowledge. Not all knowledge proves to be correct, and more so all new knowledge is not similarly appropriate for primary care. An advantage of gaining new knowledge through pathways, is the fact that somebody else already done some of quality control. However, GPs should remain vigilant to question and look for the scientific evidence of developed pathways.

3. Multidisciplinary approach enhance patient management across health professional groups: Some GPs see pathways as something that only addresses primary care. This sentiment may lead to a belief that pathways may be a restrictive factor, preventing the GP to refer the patient on to secondary care whenever the GP feels it is
appropriate. However, pathways stretch across the primary and secondary interface, and thereby the same argument can be made by specialists: pathways dictate when secondary care must accept the patient. Such rigid thoughts are not productive in healthcare. Shared decision making, that includes the wishes of the patient, as well as input from primary and secondary care physicians, remain paramount. According to Gravel et al\textsuperscript{29} shared decision making does not exclude guidelines, in fact guidelines can be a support intervention or decision aid.

4. Clinical pathways expressed in longitudinal care plans: phrased differently it means a step-by-step approach to the specific medical condition, without a specific time frame for each step. In some instances it is appropriate to just gain information and have a “watchful wait” approach, but for others with different health factors the situation may warrant investigations (including radiology and haematological investigations).

5. Clinical pathways aim to manage each clinical condition according to the local protocol, derived from evidence based guidelines, to take into account the services and expertise available in the area.

6. Clinical pathways’ philosophy was based on patient centred care: The patient and whanau are part of shared decision making and fully aware of the pathway process. Care delivery should be at a location as close to home as possible, with community services and support as enabling factors for the patients in their path to recovery.

7. Clinical pathways should facilitate continued care between the multidisciplinary team: The pathway process is to avoid missed opportunities in treating patients. Each role player must be aware of their responsibility, and must communicate this well when transferring care between different treating practitioners. After discharge the care plan should be easily obtained and known to the patient and the treating GP and other primary care health professionals, with specific knowledge of managing possible complications to prevent readmission. Should readmission be necessary, the pathway for return to hospital services should be easy to arrange.

8. Clinical pathways to coordinate care: Following the clinical pathways will avoid doubling up of expensive tests, leading to increased cost and patient discomfort.
Because it will streamline the service by having all required tests available, waitlists should be shorter and ultimately patient satisfaction should increase.

Indirect through all of the above mentioned, there are huge advantages towards rationing of healthcare. The public rationing debate was addressed by Wendy Edgar, Program Director of the National health committee, when presenting at the Conference on Priorities in Health Care, London, 1998\textsuperscript{112}. She mentioned that developing evidence based practice guidelines will increase consistency of practice, improve prescribing patterns and referral patterns, as well as promote clinical audit and CME. This combined with having a holistic or integrated approach to managing patient care which will avoid wasteful duplication of tests or diagnostic procedures, or unwanted equipment to patients, should improve expenditure in healthcare. In an article\textsuperscript{113}, based on this conference presentation, the authors emphasised that the process of guideline development and dissemination of the guidelines must be immaculate: displaying an openness with assessment, procedural fairness and it must be accepted as best practice by the majority of specialists [renal physicians in this case]. “Decision makers need to use considerable judgment about how best to use the limited resources ... [omitted]... the likely benefits and costs required to introduce guidelines, and the likely benefits and cost as a result of any changes in provider behaviour.”\textsuperscript{107}

### 2.4 Factors that can affect the acceptance and use of clinical pathways:

[The] gap, between what we know and what health care professionals do, challenges effective and efficient health care by undermining the benefits realized from advances in the science of medicine and the dedication of professionals delivering care.\textsuperscript{30}

Evaluation of barriers in the use of guidelines\textsuperscript{30} or pathways is frequently mentioned; most authors refer to the work of Cabana\textsuperscript{31} as baseline. There are various classifications and cataloguing attempts – with note that there will be different barriers in each health care setting.

The aims and development process of the Bay Navigator Pathways were discussed in Chapter 1. Professional culture is shaped by history, education and socialization factors, and the culture of a speciality can make interprofessional teamwork challenging. When developing a new, innovative programme that includes multidisciplinary team cooperation
and communication, the innovator body should be very aware of the influence of the culture of medicine. In an attempt to simplify the discussions of factors that can affect the acceptance and use of clinical pathways, I structure the next section as follows:

1. Factors relating to the pathway
   In this section the effect of the development process and the team responsible for the development of the pathway will receive attention. Thereafter the dissemination of knowledge, the content of the developed pathway and how the pathway implementation process was structured, may influence acceptance and use of the pathways. Help and back up available for users will complete the section.

2. Factors relating to the GP
   Acceptance and use of clinical pathways may be influenced by the self of the doctor, the GP work environment and possible consequences on funding received for services delivered.

3. Patient factors
   To treat patients with multi-morbidities may complicate the applicability of pathways. The ever present concern about possible medico-legal repercussions and patient expectations of care required, will receive attention.

4. Factors relating to secondary care

2.4.1 Factors relating to the pathways
A systematic review conducted by Grimshaw associated three factors to the effectiveness of a pathway: the development strategy, the dissemination strategy and the implementation strategy. Discussion of the development, dissemination and implementation of the Bay Navigator Pathways will follow, with discussion on the content and availability of support for users concluding this section.

2.4.1.1 People involved with the development of pathways
To facilitate the use of pathways, the group of doctors responsible for developing the pathways should have standing or credibility in the healthcare community. The healthcare professionals in the development teams should be reputable and have academic credentials.
that are comparable or superior to the majority of healthcare deliverers in the area. The team should be influential within the sphere of care deliverers, and have excellent communication and motivational skills to persuade their colleagues to alter existing patterns of practice, incorporating the pathways into their daily toolbox.

Grol\textsuperscript{56} described the group responsible for developing pathways as either local (or decentralised) or national (centralised, which is interpreted as remote from local setting). The distinctions between centralised or decentralised development are the pivotal point in my definition between pathways (local) compared to guidelines whose development is centralised. When a pathway is developed within a regional setting, where doctors know each other, the assumption is that the uptake and use of such a pathway should be enhanced. A systematic review of literature by Grimshaw et al\textsuperscript{63}, showed that only two out of four studies could confirm that local development of guidelines improves implementation and use. One could argue that nationally developed guidelines may draw in members with more expertise in evaluating and scrutinising research to boil it down to a more evidence based product.

Grimshaw\textsuperscript{38} makes the distinction between internal and external development. If the GP participates in the development or has the possibility of being involved, then the pathway is internally developed. If a guideline is developed internally and if there are constant patient specific reminders, it renders the highest probability of the pathway being used. One can argue that Bay Navigator Pathways are essentially internally developed, as each GP has had the opportunity to be part of the process. Interestingly, local development is ranked to deliver below average probable effectiveness for implementing pathways. Local developers are health professionals from the local area with whom the majority of the GP cohort does not associate themselves with.

\subsection*{2.4.1.2 Dissemination of knowledge about the existence of pathways}
Disseminating of knowledge about the existence of the Pathway, as well as the knowledge of how to use and implement the Pathways in practice, does not happen passively\textsuperscript{35}. Specific education to the workforce in regards to the guideline has the highest probability of successful dissemination, while stepwise education is less effective\textsuperscript{38}. Stepwise education includes education through CME, mailing of guidelines to target groups or publication in a journal. In an interesting article, Butzlaff et al\textsuperscript{57} showed that the use of electronic media for dissemination of guidelines did not increase uptake. They found that although there was a
minor increase in initial knowledge of the guideline, it was not sustained and did not lead to practical implementation. Giguere et al\textsuperscript{58} conducted a systematic review regarding the effect of printed educational material on medical practice (not guideline focussed). The results suggest that printed educational has a marginal positive effect on professional practice, but as the study design had no comparative intervention, it is impossible to draw conclusions from this study. Personal contact, for example contact with colleagues or outreach visits by peers, is very effective for dissemination of knowledge and use of Pathways\textsuperscript{64,79}. The influence of respected peers, particularly in general practice, is invaluable\textsuperscript{78}. Computer generated reminders\textsuperscript{79} are valuable once implemented.

\subsection*{2.4.1.3 Implementation}

Derived from work done by David Naylor, Bhattacharyya\textsuperscript{87} proposes medical epochs since evidence based medicine became paramount. In the “Era of Optimism” the belief was that diffusion of scientific evidence will happen passively. Then, in the “Era of Innocence Lost and Regained” phase, evidence based clinical guidelines emerged because of the realization that it is impossible to keep up with medical knowledge. Phase three, the “Era of Industrialization”, brought the knowledge that the passive dissemination of guidelines did not change practice, and performance measurement and reporting were encouraged. The current phase, the “Era of Information Technology and Systems Engineering”, places the emphasis not on the individual practitioner, “....but rather the redesign of service delivery systems to address barriers and incentives [is] required to bridge the yawning gap between best evidence and common practice\textsuperscript{87}.”

To implement new innovations, change in human behaviour has to take place. The effects of pathways in practice will be disappointing, as long as implementation strategies are not treated as an integral part of pathway development\textsuperscript{79}. Eccles\textsuperscript{81} argues that it will be useful to have a theoretical framework for implementing research into practice. Such a framework, that will bring together important dimensions of studies and the realities of the healthcare setting, will make evaluating and research on implementation much more focussed. Theoretical frameworks found in literature included those developed by Ferlie\textsuperscript{82}, Grol\textsuperscript{83}, Moulding\textsuperscript{84} and Freemantle\textsuperscript{86}. The implementation theoretical frameworks used by Moulding and Freemantle will be discussed in more detail.

Moulding et al\textsuperscript{84} started off by reviewing social and behaviour science concepts, one of which was the Diffusion of Innovation theory. With this in mind, they came up with nine key
Theoretical concepts. These theoretical concepts resonate well with the research question about acceptance and use of Bay Navigator Pathways by GPs. (see chapter 3 for application to the current research in the Diffusion of Innovation Framework).

1. The behavioural change process can be assisted by appropriate interventions, which can encourage practitioners to move from one stage to the next. The stages of change are knowledge, persuasion, decision and acceptance (or rejection) of innovation.

2. “Change agents” are peers that are involved with the innovation and promote the use of the innovation. The “change agents” are ideally situated to identify concerns, as they share the work milieu of the practitioners and have direct involvement with the innovation that are to be implemented.

3. To select appropriate implementation strategies, the readiness to change of the adopter group of practitioners should be evaluated.

4. To develop appropriate implementation strategies, the nature of specific barriers should be entertained. Appropriate steps should be considered to counteract presumed barriers, rather than ignoring it.

5. To improve the chance of success, multiple rather than single methods of guideline dissemination and implementation should be employed. This will also ensure that practitioners in various stages of adoption will have an implementation strategy appropriate for their stage.

6. Education regarding guidelines should be focussed on knowledge about the guidelines, attitudes regarding the process as well as the skills to use the guidelines.

7. Education strategies should include both the opportunity to participate in the guideline process, but also interactive educational sessions available to all practitioners.

8. A powerful change facilitator regarding attitude, is the social influence of peers using the guidelines.
To encourage and maintain guideline adoption, it is pivotal to have environmental support set up. Interesting, Freemantle\textsuperscript{86} is of the opinion that “practices may prove to be more willing to take up guidelines that challenge current beliefs than those that affirm them.” This is contrary to what I would have expected. Freemantle’s\textsuperscript{86} approach to successfully implement research into practice includes having a relevant clinical topic that will be useful when implemented. Such a topic should keep participants engaged throughout the implementation process. Guidelines should be presented in an unambiguous way. A motivated participant group is important to enhance implementation success. Clinical governance groups and help from support systems to engage, motivate and remind participants are also important factors. Barriers and facilitators change, and ongoing research and theoretical perspectives should enlighten the process of implementation.

Gro\textsuperscript{50} used theoretical perspectives to create an implementation plan. Times and circumstances change. Ongoing research should guide the development of relevant models for implementation of research. Strategies must adapt to experienced or foreseen barriers and facilitators in an ever changing healthcare milieu.

Spread and sustainability: Some interventions start small, but over time the intervention can escalate and accumulate to have a visible effect. If an audit on the implemented guideline can show that it has a positive effect and impact on practice, it can accelerate adoption\textsuperscript{89}. Audit must be built into the pathway to evaluate the effect of the pathway on the patient, the organization, hospital system, but also local and national health systems.

\subsection*{2.4.1.4 Guidelines per se}
Burgers et al\textsuperscript{37} looked into characteristics of the clinical guidelines itself as a factor for adoptability. The diffusion of innovation factors, as described by Rogers\textsuperscript{43} are suggested by Burgers\textsuperscript{37} as possible attributes of guidelines to improve adoptability. (See further discussion on diffusion of innovation in the next chapter in the section on framework development.) Grilli\textsuperscript{55} looked at three diffusion of innovation factors, namely complexity, trialability and observability as contributes of the guideline in relation to its use. Grilli\textsuperscript{55} showed that low complexity and high trialability resulted in better compliance. Surprisingly, no influence of observability was found on compliance rate, meaning that health practitioners do not need the feedback and observed influence of the pathways to comply.
Diffusion of innovation principles were also used by Grol\textsuperscript{56}, in the consensus stage of drafting new guidelines. Grol\textsuperscript{56} described the following diffusion of innovation factors as essential to develop good practice guidelines.

1. Validity – guideline needs to lead to improved health or cost outcomes.
2. Reliability – if the guideline has to be done again by another group, then the assumed result should be similar.
3. Clinical relevance and applicability: the guideline should be formatted for day to day use. When using the pathway, the GP should have no difficulty to identify to which patients the guideline applies to.
4. Comprehensiveness and specificity: guidelines should take all relevant factors into consideration regarding the patient population it serves.
5. Flexibility: guidelines will have exceptions. This should be clearly outlined, with emphasis on clinical judgement.

Pathways must have assessment instruments to evaluate and audit the effectiveness and use of the pathway\textsuperscript{25,56}. Key indicators of healthcare delivery (KPIs) provide indirect evidence regarding website based pathways\textsuperscript{61}. Literature suggestions towards evaluation include process development to reflect the care delivery through pathways\textsuperscript{25} as well as a feedback button\textsuperscript{61} whereby users can make suggestions and give feedback. Grol\textsuperscript{56} suggests a three tier approach to evaluation: guidelines being received, read, accepted and remembered; impact on practice and use in practice; and lastly if guidelines aims are achieved regarding health outcomes, patient satisfaction and health costs. Audit on effectiveness must include analyses and feedback on data: data collection can be via prompt sheets\textsuperscript{25} or subsets of referrals\textsuperscript{61}. Future clinical governance might depend on accurate and meaningful data about the quality of care delivered through Pathway programmes\textsuperscript{25}. McGeogh\textsuperscript{61} invisualized that patient safety can be monitored by application of pathway research as well.

Variance is a deviation from the care as described in an Integrated Care Pathway. Variance does not necessarily mean that there was a failure in care provided. Clinical pathways value the clinical judgement of the treated doctor. It remains the prerogative of the treating doctor to take differences in the patient’s presentation and comorbidities into consideration, appropriate adapting the care plan to provide the best individualised care plan for the patient. Variance analysis is one way to audit pathways, with the positive spin-offs of improved patient care and updating and improving pathways\textsuperscript{59}.
Pathways must be updated at regular intervals as new scientific evidence become available – suggested timeframes in literature vary from every year\textsuperscript{65}, every 2 years\textsuperscript{59} or every 3 years\textsuperscript{56}.

2.4.1.5 Help and back up with use of pathways

Kenealy\textsuperscript{60} suggested that “HealthPathways seems to have successfully developed a process that makes using their product the easiest thing to do.” This reflects the ideal world – an achievement as he refers to a New Zealand success story.

The pathways have to fit into the daily routine of the general practitioner. The fifteen minutes of consultation time is precious, and once the general practitioner has to struggle to access the relevant information within seconds, it is highly likely that the pathway will end up in the unused bin. Computer based pathways, like the Bay Navigator, uses advanced communication technology which needs the development of a skill set from the user. It is paramount to have technology support available on the spot when necessary, to timely bridge the possible gap between technology difficulties and user education. With more and more pathways available on the website, it risks to be difficult to navigate and more confusing for the user.

Pathways’ format should be clear, instructive and attractive\textsuperscript{56}, easy to use and quick to refer to. McGeoch et al\textsuperscript{61} refer to a computer based pathway when they suggest that the content should be brief and have a consistent layout, with high local relevance, to improve utility of the system.

2.4.2 Factors relating to the general practitioner

2.4.2.1 The self of the doctor

Pathways can influence the GP in various ways\textsuperscript{25}:

1. Implementing pathways will help the doctor to deliver healthcare according to locally approved paths, where referrals are more likely to include all the relevant information and acceptance of such referrals are improved. Patient care in association with other healthcare providers are streamlined and coordinated.

2. It is a valuable source of information. Many things in general practice happen infrequently, and invariably it will happen when there is nobody around to ask for advice. The information links of Bay Navigator pathways endeavour to deliver as much as possible of this at your fingertips. Working through a pathway, can be
educational and refresher of information, and links provided supply additional reading.

3. Pathways can be a way of self assessment and audit. As part of professional development, self reflection on the gaps in own performance should be identified, and pathways lend itself to be the parameter to measure performance against.

4. Peer group activities can focus on pathways as learning tool.

In a systematic review, Farquhar identified concerns from healthcare professionals relating to the use of Pathways. In the first place the notion that pathways may take away the autonomy of the treating doctor, leading to “cookbook medicine”, rather than skilled management from the treating doctor. In the second place the fear that Pathways may lead to increased litigation. This systematic review does not reflect the views of exclusively GPs, but voiced the concerns from other health professionals as well.

Characteristics of the doctor are another factor that can influence the acceptance of pathways. In a systematic review, Cochrane mentions age, gender, and inertia as characteristics of the doctor that can affect acceptance of pathways. Elovainion showed that positive attitudes towards guidelines do not always increase use - a positive attitude may be overridden by the mentioned barriers of impracticality and unavailability of guidelines after implementation.

For the primary care workforce the decision to accept or reject a new healthcare initiative, does not occur spontaneously. It is important to take into account the different culture, which include beliefs, values, attitudes, customs and behaviours, of a health care profession when setting out to implement new health care initiatives. Delamothe writes: “They [guidelines] strike at the heart of what it means to be a doctor. If doctors are not required to exercise judgment what are they there for?” He argues that guidelines prevent discretion and that “cookbook medicine” decreases the self respect of doctors and those guidelines will reduce patient confidence in doctors.

2.4.2.2 GP work environment

The general practice setting includes technology, processes and internal arrangements and these may be all affected by the pathways. With the introduction of Bay Navigator pathways, there was a change in the “This is how we do it here” point of view (personal
communication, Dr. J. Gemming\textsuperscript{15}). Therefore, in a broader sense, to consider the effect of change brought by the introduction of the Bay Navigator, change in organizational research is applicable. According to Vakola\textsuperscript{76} organizational changes cause individuals to experience uncertainty and fears about potential failure in coping with the new situation. Good work relationships positively predict attitudes towards such change. Adjustment to the innovation can be supported by good peer support and practice support to the individual doctor. Training and adequate information about the new system reduce fear and resistance\textsuperscript{76}. Financial incentives are another positive adjustment factor, but this outcome is very indirect and invisible to the earnings of the GP.

Wensing\textsuperscript{78} argues that implementation of innovation in a general practice setting is influenced by the specific characteristics of general practice per se. The characteristics mentioned are the wide variety patients seen daily, with many presenting with symptoms not attached to a specific disease. Secondly the fact that general practice is patient centered and therefore does not work just towards a diagnosis. Lastly general practices are smaller businesses, with less communication between different practices.

If patient specific reminders are possible at the time of consultation then the probability of enhanced effectiveness is highest. For example, if the read code indicates that the diagnosis made during consultation is dementia, it should trigger a reminder screen of the existence of the dementia pathway. The chance of the doctor using the pathway, will increases with such reminders. To my knowledge, technology does not link read codes to pathways at this present time.

\textbf{2.4.2.3 Funding}

General practices are business ventures, set up to deliver primary healthcare but also to render a profit for the practice owners. Funding received is based on the enrolled patient population. There is no extra funding allocated to reimburse the practices for time and money spent to incorporate, evaluate and disseminate the Pathways.

Developing pathways is an expensive process\textsuperscript{75,79}, but once this asset is fully implemented, it may deliver large cost saving through streamlined investigation in primary, and as referred patients will have all pre-workup done, take less secondary investment. Pathway development teams consist of specialists, GPs and other health professionals. The more expertise the group has, the better the quality of the pathway, but also the more expensive
their time. Once consensus on the pathway is reached, IT personnel then have to get it fully functional. Implementing pathways by education CME, paper based mail outs, and pathway champions visiting practices all drain money prior to any results becoming visible. Practices have to set time aside for education and training of their staff on the new pathways, and update software to cope with the larger amount of online activity. According to McGeogh, five percent of respondents in a survey indicated that health pathways resulted in more work with no compensatory increase in funding. Some of the increased costs in primary sector are transferred to the patient via co-payments for services, which are counter-productive towards the aims of the pathways. For the patient it means less time off work, less travel to the district hospital and more chance for whanau involvement in their health journey.

Once functional, the positive spin offs are difficult to measure and take time to become apparent. The Cochrane Review confirmed a positive reward eventually, with decreased hospital cost achieved. It is important to evaluate and review pathways, and ongoing discussions with health care administrators maintained within the governance group.

Gauld observed that the New Zealand health system has primary care governed by PHOs, while DHBs focuses on secondary care, and although DHBs fund PHOs, the two systems run relatively parallel. Policy makers have concluded that these structures should have cooperation and combined governance. The Alliance Leadership Teams (ALTs) take on this role, and drive initiatives that aim at shifting services from hospital to primary care. Integrated Performance and Incentive Framework (IPIF) incorporates a range of system wide measures, across the primary and secondary services. IPIF includes patient perceptions as well. How this will affect funding of general practices in future is still to be seen.

2.4.3 Factors that affect patients

Patients are the mainstay for the business of medicine. In a survey by McGeoch it was found that one third of GPs indicated that they experienced an enhanced doctor patient relationship since pathways were introduced. Healthcare should be patient centred on the individual doctor-patient level, but also on the macro level which includes pathway processes and patient input in governance structures. A shared decision making process is defined as the negotiation of appropriate care acceptance between health care professional and the patient. A shared decision making process assumes that the patient is well informed
about pathways that may be relevant. One way in which patients are involved in pathways, is participation in the pathway development process. Van de Bovenkamp\textsuperscript{66} found that patients experience difficulties participating in the pathway development process. For the patient to partake in an evidence based medicine milieu, a level of training should be employed, which then again leaves a question mark on the “patient” status of the participant: is such a participant an academic colleague or a true representative from the consumer? Van de Bovenkamp\textsuperscript{66} concluded that from his literature research “increasing active patient participation in guideline development is not as logical a step towards patient-centred medicine as it may seem.”

Consumers' input can be valuable in reviewing draft guidelines, focussing on supportive community involvement and patient education initiatives. Patient centeredness should be an integrated part of in-practice doctor patient communication.

Bay Navigator pathways address acute presentations for example cellulitis. BNP also address acute conditions that can become recurrent or chronic such as otitis media, and also long term chronic conditions such as diabetes mellitus.

\textbf{2.4.3.1 Multi morbidity}

General practitioners’ workload increasingly involves managing patients with co-morbidity. Frequently multiple secondary teams are (or were) involved in their care at some point in time. It poses a unique problem towards using pathways, as it can be difficult to fit the patient into a pathway developed for one condition. The structure of general practice, with 15 minute consultations, is often inadequate for managing patients with multimorbidity. Health systems lack specific systems or guidelines for treatment of patients with multi morbidity\textsuperscript{68}. Sinnott et al\textsuperscript{68} described competing views from GPs on the usefulness of guidelines for patients with multimorbidity. “Most GPs felt that guidelines were less useful in multimorbidity and that they actually added to the complexity in some cases.”\textsuperscript{68} Some GPs felt that guidelines for the specific disease should still be followed in spite of the co-morbidities involved “…why should their asthma be treated any differently just because they’ve got asthma and heart disease...”\textsuperscript{68} This notion of beneficence brings guidelines into the realm of ethics of care.

The Grading of Recommendations Assessment, Development and Evaluation (GRADE) approach grade the quality of evidence and strength of recommendations in practice guidelines. The balance between desired and undesired effects of treatment, and the
confidence level in which this can be discussed with the patient, are part of the GRADE approach. However, the grading is based on the “typical” patient\textsuperscript{69}. Patients with multimorbidity are hardly the “typical” patient group. Furthermore, national developed guidelines will have a GRADE level of confidence attached to each guideline; where as locally developed pathways do not have a grading reference. Unambiguous doctor patient discussion, with support from whanau in attendance where possible, is necessary to facilitate informed decisions. The balance between beneficence versus just doing no harm (nonmaleficence) is the mainstay of some of these discussions.

Van Weel\textsuperscript{67} argues that pathways are disease orientated, and that patient orientated pathways should be developed to address the difficulties in using pathways in this group of patients. Such patient centred pathways will have to be about proactive management necessary in co-morbid chronic illness. Co-morbidity linked with frailty is another area where the disease orientated pathways fail practically and ethically: as it may be detrimental or even unfair, to propose certain diagnostic tests or procedures to patients in this group.

Referral of patients with multimorbidity to various specialists’ clinics, where each specialist clinic only focuses on the issue related to the referral, fragment healthcare for these patients. It is only through general practice that all the lines of care for this patient are held together.

2.4.3.2 Medico-legal

Medico-legal requirements are thought be the same across all healthcare providers. However, is it the case? Hurwitz\textsuperscript{70} refer to a case (Sidaway versus The Governors of Bethlem Royal Hospital, 1985) where the judge ruled that the standard of care required by law from one sort of practitioner could be different from that required of another. By following the pathway, primary care management should be rather uniform between practices – not affected by more experience or previous knowledge of available local services. Unfortunately, very few patients have simple and textbook presentations, and even then co-morbidities may alter the time requirements for different investigations. Medico-legal safety in using guidelines are therefore embedded in the standard of care provided, modelled by the guideline, as well as in the benchmark of care set for the health professionals (for example GP) required to take on a named responsibility by guidelines.
Hurwitz\textsuperscript{70} makes the following comments regarding the medico-legal significance of clinical guidelines, firstly that agencies developing clinical guidelines may be charged, secondly that guidelines per se are not unchallengeable for the content and interpretation of the guidelines, and lastly that if a case of negligence is before the court, a clinical guidelines may be used to measure the standard of care expected. However, clinical guidelines do not usurp the role of an expert witness.

On the contrary, in the Bolitho\textsuperscript{106} case, the doctor was acquitted of wrongdoing, as the outcome was deemed a “rare case”. To ascertain this, the Bolam test is employed. The Bolam test says that an action cannot be a breach of duty if it is what a reasonable body of professionals would have done, or what is regarded as good practice in the opinion of a reasonable body of professionals.

Towards the medico-legal implications of Integrated Care pathways, Fox\textsuperscript{59} is of opinion that Integrated Care pathways should be consensus views from all healthcare professionals involved, based on evidence based medicine. Fox\textsuperscript{59} emphasized the legal necessity from the facility to provide adequate education, which should be available with implementation of an integrated care pathway.

In New Zealand, the Health and Disability Commissioner (HDC)\textsuperscript{103} plays an important role as consumer advocate. The HDC independently upholds consumer rights by promoting and protecting patients’ rights to treatment, but also stepping in to resolve complaints. The HCD also monitor service delivery and health advocacy, and suggests education when appropriate. Therefore, the risk of litigation in New Zealand is buffered by this process, making the chance of a claim through the justice system very unlikely.

Being competent in the medico-legal field, can be a stretch for the generalist. In an editorial\textsuperscript{104}, Dr. Ron Patterson, previous Health and Disability Commissioner, replied to an article by Carol Peters\textsuperscript{105}: “Medical practitioners [omitted] may draw some comfort from knowing that they are not alone in finding it tricky to respond uniformly correctly in a medicolegal quiz.\textsuperscript{104}” Standard of care delivery should be measured against best evidence of medical practice, taking into account the rights of the patient. Feek\textsuperscript{113} described the impact of guideline development on end stage renal failure and rationing, with mention of two patient cases where complaints were laid with the Human Rights Commission. Both cases elicited ethical questions as well. Clinical decision making and best practice taking all
variables into consideration with negotiation and compassion were all elements of the cases. Feek concluded: “we are not claiming that New Zealand has all the answers to rationing of healthcare services but politicians, clinicians, and the public are beginning to debate this serious issue.”

2.4.3.3 Patient expectations
Guidelines might be expected to always have an answer on how to manage disease. However, sometimes consensus cannot be reached, because there is simply not only one correct answer to the same question. Uncertainty has to be incorporated in clinical practice, and therefore uncertainty should also sometimes feature in clinical guidelines. Some practitioners may view uncertainty in clinical guidelines as a core failure, thereby distrusting the whole initiative. Burgers turns this into an opportunity rather than a failure as he argues that clinical judgement and patient perspective are the important values. These values give direction to individual management plans. Taking into account the clinical background and realities of the patient, discussion with the patient and coming to an agreed action plan, guide management. Guidelines are merely the footpath that faintly guides direction around which clinical judgement and patient perspective can distil to deliver a clear management plan.

Renewed emphasis has been placed on the patient’s perspective to improve healthcare delivery. Patients do not only want to have an idea about their work-up and referral requirements, they also want to know what waiting time frames are expected. Faber et al address this issue by pinpointing time frames within the individual care pathway draft, but this is only achievable in patients admitted for inpatient care. Waiting time reduction is high on the agenda of Ministry of Health. The aim of pathways is to minimise this waiting time, due to a more efficient referral and grading system. However, time requirements are not an integrated part of the Bay Navigator Pathways.

De Allegri found that care pathways development and implementation could not persuade participants of the benefits towards quality and reduced cost of healthcare, but participants did show great appreciation towards enhanced transparency of treatment of patients when using care pathways.

Patient portals try to connect all health care users and the patient. This goal is not yet achieved. In the WBOP PHO patient portals currently link patient records from secondary
services – including laboratory results and radiology investigations – to general practice. Records are visible through a password controlled, secure system to GP users. To date GP medical records are not visible to the hospital. Therefore it is essential that GP’s referrals letters delivers concise clinical picture and complete medical background: incorporating chronic medical conditions, allergies, history and clinical examination findings, tests and investigations done in work-up of the patient as well as medications used. This should be the bare minimum of a thorough referral letter from primary care into secondary care. Patients can not yet view their own medical records either. The patient portal system, called Clinical Health Information Portal (CHIP), might be expanded in future.

According to Kenealy\textsuperscript{60}, an electronic Shared Care Record used in Canterbury, envisages that the patient eventually will have access to their own electronic record as well. Perfecting patient portals is still a work in progress, as hiccups regarding patient privacy and control of access must be sorted in order to make these bold initiatives a reality.

Bay Navigator pathways have printable patient information sheets which can be handed patients. An informed patient will have a better understanding of the health condition diagnosed\textsuperscript{114}. The patient can work towards health improvement by addressing relevant lifestyle and diet factors. It can also help the patient to make better informed decisions\textsuperscript{114}. Better informed patients will understand the need and reason for secondary involvement and improve adherence to treatment\textsuperscript{114}.

Another way in which patients are supported in the community is by connecting them with community support groups, for example the Alzheimer’s society. Having community involvement ensures that the patient and their whanau are more holistically supported.

Advanced care plans are available on the Bay Navigator Pathway website. It can help patients to express their wishes towards the extent of health care involvement, should their health deteriorates.

2.4.4 Factors that affect secondary care

The “Sooner, better and more convenient\textsuperscript{100}” approach to healthcare placed primary care at the centre of healthcare. Pathways should decrease the demand on secondary services.

According to Kenealy\textsuperscript{60}, the issue of “professional dominance” was addressed by the pathways in Canterbury. The focus of inter-professional cooperation, in this case mainly
between hospital specialists and GPs, is a positive start to the process. However, best care delivered is in a multi-disciplinary team which consists of all healthcare providers. McGeogh\textsuperscript{62} confirmed a positive effect on inter-professional sentiments in his survey of health professionals in Canterbury: half of the responding GPs indicated that they have a more positive relationship with secondary colleagues since introduction of Health Pathways.

Hall\textsuperscript{33} investigated the effect of the culture of medicine on effective inter-professional teamwork. Each health care profession has a culture, moulded by “historic forces and ongoing sociological processes.” Thereby each profession develops an occupational identity. Collaborative inter-professional teamwork breaks down silos, in which each occupation tends to dwell on its own business. When inter-professional communication is initiated, a realization of different strengths and appreciation of each other’s skills arises. Some professional skill-sets overlap, and this blurred edges can be negotiated, avoiding underutilization of health professionals. Enhanced communication across professions and improved team spirit are ideals in the process.

From an economic point of view, this inter-professional collaboration should be able to deliver higher quality healthcare, in an appropriate setting, at a reduced cost. A Cochrane Review\textsuperscript{77} confirmed that pathways lead to less in-hospital complications, improved documentation, decrease the length of stay in the hospital and decrease hospital costs. As health pathways sit in both primary and secondary settings, it is difficult to evaluate the effect of the health pathways. Therefore, data from both secondary and primary care should be obtained in studies designed to research the impact of health pathways\textsuperscript{85}.

Bay Navigator pathways development has specialist participation. The investment of time and money from secondary services should be offset by improved integration, improved and appropriate referrals and better service delivery at secondary level.

2.5 Conclusion

There is a large body of knowledge available regarding guidelines, including several aspects regarding the development, dissemination and use of guidelines. Many of the articles were published in the latter part of the 1990s, or early 2000s. New Zealand research articles are scarce, but more recently published.
Knowledge gained from literature on guidelines will inform the next step of research design. In the next chapter, diffusion of innovation principles will be discussed, and a theoretical framework will be presented to the reader.
Chapter 3 - Research Project

General practice is the first port of call for the unwell: it is here where undifferentiated disease arrives and the debate of illness versus disease is especially relevant. General practitioners need a toolbox of specific knowledge, skills and attitudes to appropriately manage patient care on a daily basis. The Bay Navigator Pathways (BNP) were developed with specific service realities in mind, for example the larger proportion of elderly in the region. Accepting the BNP into the GP toolbox, with subsequent use when appropriate, seemed not to be a straightforward path for general practitioners. This research study was developed to look into the aspects of acceptance and use of the BNP and the barriers and facilitators that were in play. In this chapter aspects of the research process are discussed. This includes discussion on the qualitative research method employed, the interview process and participant selection, with discussion of analysis and research framework to conclude the chapter.

3.1 Research methodology

I have chosen to conduct this research using a qualitative research methodology.

For many years healthcare research focussed on researching knowledge and measurable skills, which can be quantified and compared. It is much harder to research the perspectives of the patients, the attitudes and behaviour of the professionals and the processes or contexts of the organisations in which health care are delivered.

[Qualitative research] is rooted in the interpretive perspectives found in the humanities and social sciences that emphasise the importance of understanding, from the viewpoint of the people involved, how individuals and groups interpret, experience, and make sense of social phenomena.\(^{34}\)

Qualitative research was often regarded as inappropriate for health research, because it was deemed not scientific, leaving too much room for interpretation. This sentiment has changed slowly over the last three decades, with acceptance that a qualitative research style can be employed with success to answer certain questions in healthcare research\(^{42}\). Appraisal of qualitative data, when done by different research groups using the same research framework, should yield similar results\(^{41}\). The emphasis on some areas may be more in depth, as the interpreted accent of data may vary. This however strengthens the
qualitative research method’s application in healthcare research, with more studies bringing to the fore different nuances of comparable results.

Crabtree & Miller\textsuperscript{39}, in a typology of research methods, confirms the appropriateness of qualitative research in the healthcare settings. Different elements of the qualitative research process fits well within the healthcare setting, leading to robust research opportunities created to answer previously difficult to answer questions. Discussion of these elements, as mentioned by Crabtree and Miller\textsuperscript{39}, will now follow.

The direct and personal engagement of a field researcher, who lends an interpretative focus with realistic descriptions and explanations of human interface reactions, is an essential part to deliver scientifically sound qualitative research in a healthcare setting. Data collection methods, including observation, interviews and recording of behaviour, place qualitative research closer to the researched group to get a holistic perspective of their views. Qualitative researchers also experience the realities of the milieu encountered in the research setting, allowing deeper insight and richer description of detail that can inform qualitative research. Qualitative research can be used in healthcare research with the aim to describe meaning, variation and experiences, as qualitative research can underpin these aspects accurately. Informed by a constructivist paradigm, the qualitative research process brings out the story of an interpretive experience. Such an experience is shaped by the interpreted and the social influences that surround it. No ultimate truth exists due to the acknowledged influences on interpretation. Knowledge is observed, rather than discovered.

...qualitative research involves an interpretive, naturalistic approach to the world. This means that qualitative researchers study things in their natural setting, attempting to make sense of, or to interpret, phenomena in terms of the meanings people bring to them.\textsuperscript{52}

To understand the barriers and facilitators that general practitioners had in regards to the acceptance and use of the Bay Navigator Pathways, insight in their behaviour and their everyday world would be crucial.

Ridsdale\textsuperscript{40} also argues that a qualitative research method is appropriate if the primary aim of research is to understand the beliefs that guide people’s behaviour. Therefore, qualitative research should be especially relevant in general practice research. General practice’s focus is more towards the context of the patient and the culture of health and healing. The
behaviour of the general practitioner is underpinned subconsciously by the story of the patient and striving towards the idealism of a perfect healthcare setting.

3.2 Research aims and objectives

The research question, set to be an investigation into the barriers and facilitators of acceptance and use of the Bay Navigator Pathways, embraced the attitudes and actions of the general practitioner. The subjective opinions of general practitioners on the barriers and facilitators that they encountered to accept and then use the BNP were explored. In this research, multiple levels of different health systems came into play: the GP was consciously or subconsciously affected by secondary care expectations, managers’ or funders’ demands and the patients’ needs. Secondary expectations were not only what the GP perceived to be expectations from secondary opposed on general practice, but also what the general practitioner strives to deliver to the secondary care practitioners. Out of this intrigued configuration of possibilities qualitative research was employed to match the aims and objectives of the research question at hand.

3.3 Sampling

The GP population and geographical location have been discussed in Chapter 1. In January 2015, I used data from Practice websites to identify the GP workforce in different practices. This was then checked against non specific data from the WBOP PHO office regarding the GPs registered as users of WBOP GP tools for example ECLAIR and CHIP.

In February 2015, letters were mailed to the 29 practices, addressed to the practice manager. This letter was to inform the GP population about the research project (Appendix A). The cover page of the letter requested the Practice manager to report back to the researcher any discrepancies in the current GP workforce in the practice compared to the researcher’s records. Return emails were received from 13 practices. Whether the remaining practices’ records were correct, or why the practice managers did not respond, is unknown. As it had no impact on the study, it was not further investigated. It was taken as being
correct, and the GPs working in the non responding practices were also pooled into available general practitioners for sampling.

In April 2015 the sampling process started. With a qualitative research design, non probability sampling ensures maximum variation of participants. Non probability sampling is not intended to be statistically representative, but characteristics of the population are used as the basis for the selection. The sampling approach was purposive (criteria based), where interviewees were deliberately selected to reflect particular characteristics within the WBOP PHO GP cohort. Sampling was based on the specific predetermined criteria in order to cover a range of GP characteristics. These characteristics included age, gender, years in WBOP PHO, employment model, training, hours worked and practice location. Two GPs expressed their willingness to participate in the study after receiving the Letter to Practices, and they were part of the group that were first contacted by email. With a personalised email to the identified GP, I invited the GP to participate in the study. The Participant information sheet (Appendix B) and Participant consent form (Appendix C) were attached to this invitation email. If there was no response to the email within 2 weeks, it was followed up by another email and a phone call to the GP by the researcher. Once participation was confirmed, a convenient time and place for the interview was negotiated.

In the months of April to August this process was repeated through various cycles. Although there was no difference in the health care population sample – all were GPs – the participants were selected to have a maximum variation sample. Participants were selected to include solo (only one practice) and group practice GPs, employed, locum and owner GPs (both male and female in these categories), GPs from different ethnicities, NZ and overseas trained GPs, GPs working in the WBOP for various lengths of time, and rural and urban based GPs. A decision was made not to contact more than five participants simultaneously, so that I could manage the workload and to avoid confusion and missed opportunities towards interviews. Unfortunately the only solo practice in the Western Bay of Plenty was unable to be interviewed due to GP changes and unwillingness to comment on the research question. Thus this is the only characteristic that was not included in the sample as expected in the design of the study. Fifteen interviews were conducted. There was no new data forthcoming from the interviews and a diverse group of general practitioners were interviewed by that stage.
3.4 Interviews

Interviews were identified to be the best method of data collection for the present project because it allowed for the possibility to obtain research information in the GP setting, but also because interviews are appropriate for exploring the subjective meanings attached to the information. As interviews were held face to face, it was possible to explore deeper meaning from verbal and non verbal cues given by the interviewee during the interview.

Interviews were individual face to face, held at a time and place convenient for both the interviewee and interviewer. To obtain maximum information, it was important that both the interviewee and interviewer had set appropriate time aside to avoid being rushed, but also to avoid fatigue and apathy at the end of a long day in practice.

Table 3.1: Interview location

<table>
<thead>
<tr>
<th></th>
<th>Interviews</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Business Hours</td>
<td>After hours</td>
</tr>
<tr>
<td>Interviews held at home</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Interviews held at work</td>
<td>6</td>
<td>1</td>
</tr>
</tbody>
</table>

In total, five GPs declined the invitation to participate in this study:

- One GP was on long term leave
- One GP expressed her unwillingness due to negativity towards Bay Navigator Pathways and process
- One GP changed practice and the new GP was not settled enough to agree to be interviewed
- Two GPs declined due work pressure and inability to fit interview time into their busy schedules.

An interview topic guide was used, with semi structured, open ended prompts. (See Appendix D). Each interview lasted 30–45 minutes. The interviews were audio-recorded using the Sony IC recorder ICD-UX543F. Interviews were uploaded to the online transcription service REV [https://www.rev.com/](https://www.rev.com/). Once transcribed, the interview was checked by me for accuracy of transcription. The transcribed interview was made available to the interviewee if requested. Only two interviewees requested this. Interviewees were emailed to the
interviewee for review and alterations to the manuscript. No transcribed interview was withdrawn from the study.

Prior to doing the study interviews, two trial interviews were conducted. During these pilot interviews the interview topic guide and audio-recorder’s audio clarity were trialled. After the trial interviews feedback were obtained from the interviewed GPs regarding the interview schedule and other aspects of the interview. Feedback and ideas were considered, as well as length of the interview, and incorporated into the final version of the interview topic guide. It was also important to iron out any possible issues with technology: use of the recorder and the upload of recording onto the laptop using Sound Organiser™ software. The trial interviews were self-transcribed to avoid extra costs.

A voucher of appreciation was given to each interviewee. The value of this voucher was $25, in accordance to the Ethical approval stipulations.

3.5 Analysis:

“[In] qualitative research the analytical process begins during data collection as the data already gathered are analysed and shape the ongoing data collection.”

3.5.1 Finding an appropriate framework for analysis:

At initial application and submission of my research proposal, I suggested an inductive thematic analysis framework. This would mean that I would develop the codes and categories solely from the interview data. As I worked through the interviewing process, it became apparent that pre-existing frameworks to analyse implementation could help me make better sense of the data – there was a case for a deductive approach. This idea was suggested to me by one of my supervisors (Prof. T. Stokes) who flagged up Belizan’s Stages of Change model as a way to make sense of my data. Independently, I had discovered the Diffusion of Innovation Framework in my reading and considered that this would address the research requirements well, and the framework would allow me to thoroughly explore and address the nuances of the data collected. The Diffusion of Innovation Framework provided a template similar to the template organising approach described by Crabtree and Miller in which the results are classified according to a pre-existing set of criteria.
3.5.2 Diffusion of innovation

Being innovative is an important ability in modern day life. Innovations usually stem from someone identifying a gap or deficiency in day to day life. These gaps are addressed by developing something that can bridge the gap, smoothing out the path. The innovation sometimes takes some adapting and fine turning prior to it fitting well into the gap – causing initial questions about the practicality of the innovation.

Many people do not notice deficiencies in current practice, as they detour the potholes and found ways to overcome obstacles. New innovation is therefore deemed unnecessary, until the smoothing effect of the innovation on other aspects of life become visible. It may take time for the innovation to become known, more so to be fine-turned prior to becoming mainstream procedure. Sometimes it is less effort to use the less effective, but known and well paved way, rather than being the pioneer in breaking new ground that are initially bumpy.

Diffusion is the process in which an innovation is communicated through certain channels among members of society, over a period of time.\textsuperscript{43}

The four main elements of diffusion are:

1. An innovation
2. Communication
3. Time
4. A social system

Rogers\textsuperscript{43} developed the Diffusion of Innovation theory. Greenhalgh\textsuperscript{46} applied the Diffusion of Innovation theory in healthcare research.

In the next section I detail how I applied the elements of Diffusion of Innovation to the research on “The barriers and facilitators to acceptance and use of the Bay Navigator Pathways by GPs in the Western Bay of Plenty PHO.

3.5.2.1 The Innovation

I view the Bay Navigator Pathways as an innovation in service delivery and organisation, as it fits the definition by Greenhalgh et al\textsuperscript{46} “...a novel set of behaviours, routines, and ways of working that are directed at improving health outcomes, administrative efficiency, cost effectiveness, or users’ experience and that are implemented by planned and coordinated
actions.” However, the Bay Navigator Pathways implementation may not have been as planned and coordinated as the ideal model (see Chapter One).

### 3.5.2.2 Communication

Communication is one of the skills that General Practitioners usually claim to do well at— that are what we do every day. However, doctor patient communication is only a small part of the communication towards diffusion of innovation. Keeping up with the massive amount of new innovations that are produced nearly on a daily basis remains a struggle for healthcare professionals.

There are a range of communication channels that needs to be open towards diffusion of the Bay Navigator Pathways between all the role players:

- WBOP PHO and DHB representatives need to feed information to their staff
- Bay Navigator Governance Group needs communication with role players in prioritising Pathway development
- GP to GP (in the group, in practices and between individuals)
- GP representatives with multidisciplinary team members regarding Bay Navigator Development process
- Electronic newsletter to GPs with information about Pathway development and information
- Personal email contact with information about GP meetings to inform regarding completed Pathways, information on CME events and requests to join future development teams
- Bay Navigator Website: with completed Bay Navigator Pathways and separate information sections as described in Chapter One
- Face to face in practice meeting with specialist regarding Stroke Pathway, or Nurse specialist regarding Dementia Pathway
- Patient advocacy groups and Iwi need to draw attention to the Pathways and the use of patient information available on the Bay Navigator Website
- Doctor to patient information about existence and aims of Pathways
- Local media and newsletter coverage of the Pathways and intended outcomes
Communication channels for making GPs aware of Bay Navigator Pathways rely mainly on:

- Initial mass meeting with all role players
- Continuous email communication and information dissemination by GP liaisons
- The inquisitiveness of individual GPs when emails are sent out to ask for participation in Bay Navigator Pathway development
- Post pathway development CME meetings
- Small scale visits from development champions to individual practices.

David Davis\(^{47}\) concludes that dissemination of new knowledge or information is more effective when it enables GPs to incorporate their learning into everyday practice. An important factor in CME about Bay Navigator Pathways should be strategies to increase potential for change in behaviour and practical use of the Pathways. Diffusion investigations showed that a scientific grounding is not the most valued attribute of the innovation. Instead, most people depend mainly on a subjective evaluation of the innovation, conveyed by an experienced peer.\(^{43} p.19\)

### 3.5.2.3 Time

Time is not a linear part of the framework. Due to the variables in exchange between the components of the framework, time should be seen as a silent component of the framework. The significance of time in the framework is the necessity of managing the process of audit and feedback to members, and having cut off timeframes for completing these activities.

As the process of diffusion develops over time, some reinvention may take place. This means that the innovation (the Bay Navigator Pathways), may be adapted or adjusted to polish out some issues that was identified. As time elapse, some GPs may lose interest in the process (discontinuance), while other may become late adopters. The secret of diffusion is to have a continuous ability to be topical, and to keep the attention of GPs by reinvention and audit feedback of Pathway achievements.

Adopters and rejecters may vary over time, and the rate of adoption or rejection of the Bay Navigator Pathways may be different in different geographical areas of Western Bay of Plenty PHO.
3.5.2.4  A social system: The GP

General Practice has a varied workforce. Cochrane describes some factors that she feels are the gaps between knowing and doing in practice. These include behavioural barriers, attitudinal barriers and professional perceived barriers. An example of behavioural barriers is the lack of awareness of new innovation or the lack of critical appraisal skills. Such barriers have to be overcome by acknowledgement of deficiencies and actively working towards gaining the skills. Attitudinal barriers are more difficult to overcome, as it involves a perceived competence and may be rooted in authority issues. Individual factors, for example personality, age, gender and peer influence, can be perceived as barriers. However innovators can wrongly label groups. Such perceptions probably do more harm than direct questioning to obtain the individual’s true experience.

This research study included GPs with a diverse educational and cultural background, working in dissimilar settings and in different employment models. Apart from gender, personal characteristics were not part of the sampling process. Time working in the WBOP PHO does not reflect the age of the interviewee. No specific personality type testing or questioning about their self perceived competence or professionalism were done.

3.6  The Culture of General Practice

The barriers and facilitators of acceptance and use of Bay Navigator Pathways by General Practitioners have to be seen within the wider scope of the Culture of General Practice. The culture of General Practice is a set of attitudes, values, goals and ways of doing things that characterise general practice. I discuss this issue here because it has a bearing on the process of interpretation of the results. The process of enculturation probably starts from entering medical school, and subconsciously becomes second nature in behaviour and way of thinking. It is a difficult to describe entity, with common goal and understanding between general practitioners, a sort of “knowing your place in the sun” within the wider community of general practitioners. It is a non threatening society, a peer supported oversight that keeps check on each other’s wellbeing and performance. The homeostasis between members is invisible, although disturbance at any point will cause a rippling effect throughout the community.
Within this culture, it takes leadership to cultivate acceptance for change and new interventions. Peer opinion leaders exert influence through their representativeness and credibility. Expert opinion leaders from outside the GP sphere for example specialist, will be influential through their authority and status. According to Wilson and Cunningham\textsuperscript{48} p.167 medical culture appears to be more collectivist than individualist, where group loyalty is larger than the individual. This may negatively influence the diffusion of innovation if the majority of the group does not accept the innovation. According to Greenhalgh\textsuperscript{46} p.601 doctors tend to operate in informal, horizontal networks, which can make diffusion through peers highly successful, but only if a big enough group of GPs accept the innovation.

Dixon-Woods\textsuperscript{49} concludes:

...improvement requires multiple approaches, often apparently contradictory: strong leadership alongside a participatory culture; direction and control and also flexibility in implementation according to local need and critical feedback on performance without the attachment of blame.

### 3.7 The innovation-decision process

This is the process through which an individual, over time, moves from knowledge about an innovation towards forming an attitude towards the innovation. This process results in either adoption or rejection of the innovation. Should the new idea be adopted, then the process of implementation takes place. Once implemented, the next phase is to sustain and confirm the correctness of the choice. The innovation-decision process does not always crystallize each of the elements as a specific entity; it can be a rolling effect where the elements merge into the larger effect of the process. In retrospect, however, the elements can be identified as present within the wave of occurrence.

For the present study, this innovation-decision process was slightly adapted to incorporate the specific requirements of my research question, and to express the elements that crystallized from within the process.
The process flow may not always be uniformly in one direction. For example, there may be multiple phases of interaction between the persuasion/decision phase and implementation, when implementation hiccups causes the GP to revert back to the decision phase to re-evaluate the commitment to the Bay Navigator process.

Out of the development aims of the Bay Navigator Pathways (see Chapter 1) the three groups of people that have interest in the Bay Navigator Pathways are general practitioners (primary care), patients and the hospital system (secondary care). The barriers and facilitators identified by the interviewees are categorised within the results according the group that will be affected by the named barrier or facilitator. This divide may be artificial, as healthcare is one system. The patient should be central in care delivery and it is my interest to see if most of the barriers and facilitators are patient focussed.

**Table 3.2: Development of the Diffusion of Innovation Framework**

<table>
<thead>
<tr>
<th>Development of Bay Navigator Pathways</th>
<th>Persuasion</th>
<th>Decision</th>
<th>Implementation</th>
<th>Sustainability confirmation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effect on GP</td>
<td></td>
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<tr>
<td>Effect On Patient</td>
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<td>Effect On hosp</td>
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The innovation: (also see 3.5.2.1)

To form an attitude towards the innovation, the individual is persuaded by perceived characteristics of the innovation. This may include the relative advantage of the innovation, if it is compatible with the situation, the complexity of the innovation, if the innovation can be trialled on smaller scale, and the observability (feedback on the impact) of the innovation.

**Persuasion/decision to use the innovation: (also see 3.7)**

The GP must be informed about the new innovation. This process was split in two halves: obtaining information relating to the BNP, but then also the second important element of practically apply the BNP in general practice. The gap between research and practice cannot be breached without obstacles. This is partly because practitioners spend less than one hour per week\(^{107}\) (on average) on reading, and partly because of a lack of ability to appraise
published work. Practice does not automatically reflect research findings\textsuperscript{86} due to a lack of implementation of the most recent research findings.

Closing the gap in translation of knowledge to practice will play a part in efforts to improve health outcomes\textsuperscript{108}.

\textbf{Implementation:}

Moulding\textsuperscript{84} describes the concept of change as a process, where the readiness for change dictates targeted implementation strategies. This concept makes the need to know the barriers and facilitators that are in play, essential. To strategize implementation, attention must be given to social aspects (see 3.5.2.4), the culture of practice (see 3.6) and the work environment of the GP (see Chapter 1). Organizational support, including practice management and PHO involvement also play a role (see Chapter 1).

Cook\textsuperscript{89} expressed the integration of all the abovementioned aspects as follows: “ICP [Integrated Care Pathway] development is not a quick fix and therefore requires commitment and ownership from clinical teams, an infrastructure to support such teams and organizational support at all levels.” Grimshaw et al\textsuperscript{107} described the difficulty of balancing the organizational, peer group and individual barriers with patient expectations and information overload – making the GP vulnerable to avoid implementation of new innovations.

\textbf{Sustainability:}

Organizational investment\textsuperscript{89} in the ongoing development, improvement and reintroduction of BNP is an important factor for the sustainability of BNP. Technology\textsuperscript{89} to swiftly share knowledge between primary and secondary sectors as well as funding agencies may also enhance ongoing use. Another factor that may lead to sustainability of the BNP, is population based improvement in clinical outcomes, and the cost of the desired clinical changes are minimized\textsuperscript{107}.

Health policy is necessary to sustain integrated systems of care – treating the right patient at the right place by the right healthcare professional\textsuperscript{85}.
The perceived characteristics of The Bay Navigator Pathways will influence GPs to form an opinion about it. I classified these characteristics under the process heading where I felt it was most applicable.

### 3.8 The framework for analysis

#### 3.8.1 Development of the Bay Navigator Pathways:

**Aim:** It is important in the Development of Bay Navigator process to know if the aim of the Pathways is known to the interviewees. The understanding of the interviewees will be coded towards their understanding of the aim of the Bay Navigator Pathways towards the effects on GP, patient and hospital.

**Knowledge:** The interviewees should have clear ways of keeping up with knowledge of the Bay Navigator Pathways. Knowledge of the Bay Navigator Pathways, or the lack there of, can affect the GP, patient and secondary care. The barriers and facilitators were coded separately.

#### 3.8.2 Persuasion/decision:

**Barriers:**

The coding began with a list of possible barriers. This list was drawn up after conducting all interviews and reviewing the interviews post transcription.

- **GP:** this code included attitudes of the GP towards the BNP, as well as possible characteristics of the GP. It also included possible GP related objections towards change in general.

- **Pathways:** various barriers were mentioned towards the difficulty in interpreting, applying and using the Pathways in day to day practice.

- **Technical difficulties:** issues with computer compatibility, different software compatibility issues and issues regarding the use of the Bay Navigator website were coded in this domain. Included in this were issues with the format of pathways.

- **Practice:** We are all creatures of habit. The normal way of doing consultation, referral or discussion with patient were affected by the pathways, and barriers mentioned were be coded. This expanded after analysis into various subcodes.
• **Medico-legal:** Frequently mentioned was issues that impacted on the safety in medical practice.

**Facilitators:**

• **GP:** Characteristics and attitudes of the GP that facilitated the acceptance and use of the BNP were coded in this domain. It included positive ideas about motivating and managing the change in practice and routine. Multiple facilitators that did not fit under the pathway facilitators were included into this node.

• **Pathways:** Mentioned attributes of the pathways that facilitated acceptance and use was coded in this domain.

### 3.8.3 Implementation:

Interviewees, who had implemented aspects of the Bay Navigator pathways and made comments about the Bay Navigator Pathways in this regard, informed implementation.

An innovation will be used more if it becomes the norm and essential to use within a system. This is called the centrality of an innovation: where practice has to incorporate the innovation to be able to function. The Bay Navigator Pathways are not essential for practising; all functions of referral and investigations can be done outside of the BNP. There are some departments at the hospital that return referrals to general practice if it does not include the necessary information (as per the pathways), but this is infrequent.

GPs may implement new innovations easier if they expect the pathways to simplify their practice – getting investigations arranged and referrals accepted without any bounce backs.

**Reinvention:** If a new innovation is used, some changes may occur spontaneously when there are unforeseen issues experienced by the user. These changes are usually to iron out such difficulties. Not all users may find the same hiccups, and similarly if the same issues are identified, different people may reinvent the innovation slightly differently. These subtle changes made by the interviewees, or suggested by the interviewees, were coded under reinvention ideas.

### 3.8.4 Sustainability and confirmation:

These elements of the process might frequently not been achieved yet. However, most interviewees have ideas about the ideal of integration of care between secondary and
primary. They had ideas or questions about the audit process or the results achieved by the Bay Navigator pathways.

Specific prompting was done during the interviews to seek the views of the interviewees regarding the future of the Bay Navigator pathways. Although generalization is not an easy task in qualitative research, interviewees gave some insightful comments about the use of pathways in the wider New Zealand context. This will be described as points of interest.

3.9 Process of analysis:

The textual data files were uploaded to NVivo, a qualitative research software programme, designed to assist with data organisation and analysis. The template organising style in practice: Nodes were created on NVivo in accordance with the ideas developed in the framework (see above). Due to the complexity, colour coding was used to assist in the correct allocation of textual phrases into the appropriate nodes or supernodes. The process was reviewed by the supervisors (CJ and TS).

After completion of coding of the 15 interviews, data was analysed according to the Diffusion of Innovation framework. All data was utilized and categorized, and with analytic skill and repeated reviewing data was linked together.

Computer software simplified the analysis process, but it was still the skill, perseverance and insights from the researcher that drew a link between categories and managed to see the illusive theory emerging.

3.10 Validity of the research:

There are no easy ways to ensure the validity of qualitative research. Validity refers to the likelihood that research findings accurately reflect the field of interest. Mays and Pope refer to the “subtle realism”, which is an attempt to represent the underlying reality of the researched topic, rather than an absolute truth. Jeanfreau move away from the terminology of reliability and validity, which is traditionally used in quantitative research, in
favour of using the term trustworthiness. Trustworthiness implies that the study reflects an accurate interpretation of the participants’ experiences.

Trustworthiness is a term inclusive of 3 processes: confirmability, credibility and fittingness. Explanation of these terms follows in the next paragraphs.

- Showing trustworthiness has two important aspects:

1. Trustworthiness through fittingness:
   Fittingness implies that the findings of the study can also fit outside the particular study (transferability). It also refers to the possibility that the findings may have meaning to other groups or contexts other than in the study design in which it was derived from (generalization).
   To ensure fittingness, it is paramount that the study should have accurate description of findings, obtained through depth of analysis of the available data. This sentiment is echoed by Pope. This is done by clearly demonstrating how systems of classification evolved into more sophisticated structures and well defined concepts. A qualitative research study should show rigor in data analysis, and this increase the strength of the data (credentialing).

2. Trustworthiness through appropriate management of data:
   Confirmability: this means that there is an accurate documentation of the researcher’s thinking, methods and show how decisions were made during the research and analysis process.
   Credibility: the confidence in the believability of the research. This is achieved through the following processes:

- Triangulation: Can be done either by using two different methods of data collection (for example interview and observation), or by comparing data from two different sources (for example interviews with members of different interest groups). Triangulation can ensure comprehensiveness, but is a weak indicator for validity. Triangulation is not an ideal way of ensuring validity because methods may vary (for example one good and one weak method used). It is also difficult to adjudicate between different accounts given by members from different groups. As my research study only included one method (interviews) and one interest group (general practitioners) triangulation was not possible.
• Repeated contact with participants: such contact remains possible throughout the research time, in case there are any uncertainties regarding the data obtained.

• Peer debriefing where questions about the research question and/or findings are discussed and considered: this process was employed in doing the trial interviews and throughout the time of research by discussion with supervisors and supportive colleagues. Interviewees were not included in this process.

• Respondent validation\(^{41}\): this is the process where interviewees are requested to review the analysis of the researcher. Respondent validation has the downside that it will be one person’s view; implicating it may not correspond with the overall trend. All the interviewees in the research study indicated that they would like a copy of the research findings. This was made available to them. However, it was not planned to share the coding of the interviews with the interviewees – although on request this would be considered.

• Reflexivity: Reflection on self as researcher

I am a GP, employed by a privately-owned general practice, in the WBOP PHO for nearly 13 years. That is the reason why I embarked on this study, due to my own clinical experiences and difficulties in managing patients in primary care. Furthermore I am a medical educator, involved in the GP education programme for the last four years. In the latter part of 2014 and into 2015, I was one of three GP representatives in the Bay Navigator pathway development team for Attention Deficit and Hyperactivity Disorder. I made myself available for the latter to experience the process in developing a pathway (which, interestingly, is probably the only pathway where no progress could be made between all the stakeholders, and the process reverted back to the original referral process).

The abovementioned factors influence my stance towards the findings and interpretations of these results. I had to reflect on my demographics as an European, female, overseas trained GP and kept a distance between my colleagues and my work as a researcher. This was true of the process of sampling, interview conducting and analysing the data obtained.

Qualitative research results, that enlighten the full spectrum of respondents’ realities, can be confronting.\(^{51\ p\ 59}\) As the respondents are “part of my own”, the insights and realities gained
through this research will need to be discussed and reflected on within the supervision team and also within the wider scope of professional support network if necessary.

3.11 Ethical Approval

Ethical approval Category A was applied for, and obtained: Reference Number: 14/187 October 2014. Approval was also gained from the University of Otago Ngai Tahu Maori Research Committee.
Chapter 4 – Results: Theme 1 - Development of Bay Navigator Pathways

The next three chapters outline the results of the present research. In this first results chapter, a synopsis of characteristics of interviewees in relation to the GP workforce in the Western Bay of Plenty PHO will clarify appropriateness of interviewee selection. The aim of the Bay Navigator Pathways (BNP), as mentioned by interviewees, will follow. Then data on dissemination of knowledge of the BNP, including barriers and facilitators to development of acceptable BNP will conclude this chapter.

4.1 Participants

Fifteen general practitioners from the Western Bay of Plenty were interviewed. The sample was purposively selected to include all variants of characteristics mentioned in the Methodology chapter. Unfortunately it was impossible to interview a general practitioner in solo practice.

Table 4.1: Characteristics of GP Participants by gender

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
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<td></td>
</tr>
<tr>
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<td></td>
</tr>
<tr>
<td>New Zealand trained</td>
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<td>3</td>
</tr>
<tr>
<td>Overseas trained</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td><strong>Hours Worked</strong></td>
<td></td>
<td></td>
</tr>
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<td>6/10 – 7/10</td>
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<td>8/10 – 9/10</td>
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<td>1</td>
</tr>
<tr>
<td><strong>Practice location</strong></td>
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<td></td>
</tr>
<tr>
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<td>5</td>
</tr>
<tr>
<td>Semi-rural</td>
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<tr>
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<td>1</td>
</tr>
<tr>
<td><strong>Employment</strong></td>
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<td>Locum</td>
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<td>1</td>
</tr>
<tr>
<td>Employed</td>
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<td>3</td>
</tr>
<tr>
<td>Owner</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Independent contractor</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Characteristic</td>
<td>Male</td>
<td>Female</td>
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<tr>
<td>Years in WBOP PHO</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;2y</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>2-3y</td>
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<td>1</td>
<td>2</td>
</tr>
<tr>
<td>&gt;10y</td>
<td>5</td>
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</tr>
</tbody>
</table>

Table 4.2: Ethnicity of GP Participants

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Number of interviewees</th>
</tr>
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<tbody>
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<td>United Kingdom</td>
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</tr>
<tr>
<td>New Zealand Maori</td>
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</tr>
<tr>
<td>New Zealand Not defined</td>
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<tr>
<td>South African</td>
<td>1</td>
</tr>
<tr>
<td>Asian</td>
<td>1</td>
</tr>
</tbody>
</table>

Table 4.3: Special Interests of GP Participants

<table>
<thead>
<tr>
<th>Special Interests</th>
<th>Number of interviewees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aged care</td>
<td>2</td>
</tr>
<tr>
<td>Management</td>
<td>4</td>
</tr>
<tr>
<td>Maori health</td>
<td>1</td>
</tr>
<tr>
<td>Adolescent health</td>
<td>1</td>
</tr>
<tr>
<td>Emergency medicine</td>
<td>4</td>
</tr>
<tr>
<td>Research</td>
<td>1</td>
</tr>
<tr>
<td>Teaching</td>
<td>4</td>
</tr>
<tr>
<td>Minor surgery</td>
<td>4</td>
</tr>
<tr>
<td>Vocational trainee (GP)</td>
<td>1</td>
</tr>
<tr>
<td>Addiction medicine</td>
<td>1</td>
</tr>
<tr>
<td>Mental Health</td>
<td>1</td>
</tr>
</tbody>
</table>

Some interviewees specified more than one special interest, and therefore the total does not add up to 15. Interviewees had a wide scope of interests and diverse practice settings.
In early 2015 there were approximately 181 general practitioners in the Western Bay of Plenty. Of these, 82 were female and 99 were male. The gender distribution of the participants reflects this trend.

53% of interviewees were overseas trained doctors.

The expected trend that male doctors overall work more hours than female doctors were visible in the cohort interviewed.

There are approximately 12 doctors that work in rural practices and a further 17 semi-rural. Urban practices are all within the larger Tauranga metropolis, while semi-rural practices are Te Puke and Omokoroa. The rural practices associated with the Western Bay of Plenty PHO are Katikati and Waihi Beach.

Female interviewees had a wider variety of employment backgrounds, which can potentially enrich the data on the acceptance and use of Bay Navigator Pathways.

Bay Navigator Pathways were launched in early 2011, which is nearly five years ago. Therefore, doctors working in the WBOP PHO for five years or longer would have been here since the beginning of the project, which equates to nine interviewees (60% of interviewees.)

4.2 The aim of Bay Navigator Pathways

When I was contemplating what prompts to use in the interview schedule, it came as a rather basic principle to start off with an understanding of the aim of the BNP and getting the interviewees’ insight in why the BNP were developed. It would have been pointless to have an interview about the acceptance and use of the BNP if there was absolutely no basis of understanding and knowledge of the existence of the BNP.

It was noticeable how uncertain interviewees were regarding this prompt, with a range of expressions of insecurity, ranging from

Participant 3:  *I really don’t know...*

to

Participant 11:  *I think...*
However, all the interviewees had some insight of the existence of the BNP. The trend of uncertainty was not related to the length that the interviewee was in general practice in the Western Bay of Plenty.

From this question conversation flowed naturally on to the interviewees’ insights about the reasons why Bay Navigator Pathways were developed. Interesting, all of the interviewees started off by discussing the role of the Bay Navigator Pathways in relation to the general practitioner. Many interviewees (11/15) also touched on the effect of the Bay Navigator Pathways on the hospital system or the primary secondary interface. Just over half (8/15) mentioned anything regarding the patient and the effect of the patient of the delivery of service to the patient as response on this prompt.

If the GPs can associate with the aims of the pathways, it is hypothesised that that they will be more likely to accept it. During the interview process, interviewees expanded and added to their initial expressed views on the aim of the Bay Navigator Pathways, clarifying and adding valuable remarks.

One interviewee drew attention to the history of the BNP in relation to it stemming from the Canterbury Initiatives. One interviewee mentioned the early meetings to plan how specialists, GPs and administrators can work together to address how service delivery should be managed.

Participant 1:  
...production of pathways is merely a result of the process that we wanted to have in place.

The aim of the Bay Navigator Pathways is to facilitate co-operation between all role players in health. Major role players in the Bay Navigator Pathway interaction include primary care medical staff, including general practitioners; hospital based medical staff, including specialists; funders and administrators from the PHO and DHB. At the centre of the interaction are the patients – who need timely, appropriate and local quality medical services. Interviewees expressed their ideas on the relationship between these elements. The next sections will present their views.

4.2.1 The aim of the Bay Navigator Pathways in relation to general practice and the GP:

Looking at the data obtained on interviewees’ insights on the why the BNP was developed, most attention was given to how it has affected general practice and the GP.
BNP are guidelines given to general practice (compared to co-developed by general practice), however this was mentioned very neutrally without any suggestion that it is an issue by the interviewees. Interviewees spoke positively about the BNP as something that can help the GP as “guidelines” or “how to do” strategies.

Participant 12: ...to make it easier for GPs or to give them guidelines, I suppose..

BNP can be an information portal for GP. Mentioned here is the variability between departments’ criteria that cause confusion for GPs.

GPs may have a better idea of what to expect once a patient is referred to the hospital, due to information that can be obtained from the BNP. Centralized information is a plus.

Participant 6: One of the frustrations I have with general practice is bits of paper saying your family planning here and domestic violence there. It just seems that little bits of paper that you can never find.

Education is the next aim mentioned. Following BNP can be educational regarding the investigations and the processes that needs to be followed for different conditions. Ongoing medical education is important in all spheres of medicine, and if education can overlap with a tool used every day, it should make staying up to date easier.

Participant 10: Improving, educating and keeping GPs up to date in best practice.

Going hand in hand with the theme of being a good GP, is the mention by interviewees about the completeness of care. If all primary care investigations are done according to the pathway, and the treatment modules followed prior to referral to the hospital, then the GP is doing a good job.

Participant 6: Bay Navigator is really a hub where GPs can determine quickly the information and investigations that have to be done to work up a patient, to get them to the point where the GP wants them to go.

The BNP giving direction to referral paths was seen positive as referrals that contain all the necessary information, are less likely to bounce back and thereby save time and decreased the workload to the GP. However, it was also viewed as a barrier or an obstruction of the GP to do a referral, because if the patient does not fulfil the specified criteria, then the referral cannot be done.
Participant 14: *because you’re referring patients thats fulfilling the criteria, so you won’t get your referral sent back because of funding issues and the patient cannot be seen, so it takes away that extra step.*

### 4.2.2 The aim of BNP in relation to secondary care

The BNP is a PHO initiative. Government policy (discussed in Chapter 1) now expects care to be based in the primary sector. Therefore, service delivery has to be renegotiated. Clinical leadership was important to get this process off the ground. Not only did the system have to change, but also the perceptions of the role players, and the expected role that each speciality had to play within this changed system.

Coordinated care implies that there must be communication between primary and secondary clinicians on each speciality’s responsibilities. Respondents acknowledged that there needed to be improved communication between clinicians in primary and secondary services.

Participant 1: *... that was to encourage clinicians to talk to clinicians.*

Although the aim is that BNP benefits everyone, a common theme that emerged during the analysis was how hospitals were thought to benefit from the BNP because the pathways help to avoid unnecessary hospital admissions and referrals. It also means that more services are required to be delivered by general practitioners and respondents talked about the need to alter some of their processes.

### 4.2.3 The aim of BNP in relation to the patient

Patient centred care should be paramount in general practice. As seen thus far, participants recognise the need for GPs to alter and adapt their processes to align with secondary care is high on the agenda of the interviewees. There were no interviewees that questioned the need for primary and secondary care to align. What follows, is how interviewees relate the Bay Navigator Pathways and the impact there of on the care for their patients.

Most participants acknowledged that all patients should have access to comparable services, with the same benchmark for when further investigations and referrals should be indicated, irrespective of who they are, where they live or whatever their background is. The right of the patient to standardized care are incorporated in the BNP according to interviewees.

Participant 7: *standardized pathway of care for current patients in the Bay.*
Participant 6: _“consistency of delivery of care for people.”_

If the GP has doubt about the eligibility of the patient for secondary services, BNP can be seen as a benchmark to which the patient’s condition can be measured.

Participant 3: _“few times were similar for patients [who], in my opinion, didn’t meet that criteria, so I thought “Oh, maybe I [will] just check [the BNP]”_

When treating patients in general practice, the information on BNP can act as a central hub where GPs can quickly access information and investigations that have to be done to work up the patient, whether that is to the point where referral is necessary. Best practice is promoted through following the BNP.

However, participants questioned the benefit for patients.

Participant 4: _“Would altering the pathways in any way make it any easier for patients to get into the system? Don’t know.”_

### 4.3 Involvement of interviewees in the development of Bay Navigator Pathways

General practitioners had the opportunity throughout the BNP development process, to be part of the development teams for the different pathways. It was important to know how many (if any) of the interviewees were part of the process. If interviewees were involved in this process, a question on how that involvement coloured their perceptions, followed. The data obtained from these elements of the interview process will now be discussed.

A minority (three) interviewees were involved in one (or more) Pathway development processes. Some of the interviewees mentioned having a GP friend or a GP colleague involved in the pathway development teams. Interviewees that were involved in BNP development processes reported that they had gained an enhanced insight of the aims of BNP.

Participant 15: _“Being aware of the consultant involvement and being aware of how much thought have gone into the pathway as opposed to it just being something you have to follow.”_

However, even interviewees involved felt that their knowledge of BNP was insufficient when they were faced with using the system.
Participant 6: It’s amazing how ignorant I was about it even though I’ve been involved in the process.

Interviewees became involved in specific pathway development processes through several different factors. These include special interest in the topic, being motivated by GP friends or colleagues being involved, and interestingly, also as part of Professional Development plan to educate self-identified weaknesses in knowledge.

Participant 10: …because it was part of my professional development. Because actually, [speciality omitted for anonymity] is one of my weakest suits, so it was to educate myself, so I did it.

4.4 Keeping up to date with Pathway development

During the development of the BNP, the pathways were distributed and promoted to the GPs who are to use it. The next section will highlight the factors that interviewees mentioned in regards to how they keep themselves updated on the ongoing development of Bay Navigator Pathways, including barriers and facilitators mentioned in this regard. Before GPs can use the BNP to its full capacity, they also need to know how to use it. Concerns and successes in this regard will be highlighted. GPs should also be informed on what other services are available on the Bay Navigator website, for example the information hub and patient resources.

Interviewees identified that lack of awareness is a major drawback in the utility of the Bay Navigator Pathways, and this is illustrated in the following remarks:

Participant 4: I think the pathways are the ideal. Me as a practicing general, I’m slightly below probably using those pathways as much as I could. Would I change them? No, I just need to get more familiar with them.

Participant 6: It wasn’t really a difficulty. It was more just a lack of awareness. That didn’t matter in terms of function.
4.5 Introduction of Pathways to GPs

Attention will now be given to the perspectives of the interviewees on factors that they perceive will affect the openness of the GP group to introduction of the Bay Navigator Pathways.

A GP that settles in the community and has intentions to practice in the WBOP for some time opined that GPs should be willing to go to meetings and learn more about BNP.

Participant 7: *I think if you have the buy-in to the area and you think it is going to help you then you will...*

Participants also indicated that they would measure the need for the BNP against their current practice. Some interviewees felt that their practice is already in line with the suggested treatment pathways; therefore BNP makes no difference in their day to day practice.

Participant 7: *I know that’s there if I need it, but otherwise my care was what the pathway does already, so I don’t need to refer to it.*

An attitude that the BNP are unable to contribute to improved practice efficiency without reflecting on the doctor’s own practice, may lead to failure to use the BNP. The rapid advances in medicine and changing practice milieu, ask for self reflection by GPs.

Participant 1: *...am I needing to know anything in addition to what I know now?*

Another positive attribute by participants to the BNP is the fact that it is regarded as being local and that the directions are in line with the suggested best treatment for a certain condition. The changing nature of best practice, combined with the available secondary and primary expertise, underpins the pathways. This gives direction to how GPs should work up and manage the patients according to Bay Navigator Pathways.

Participant 9: *...this is what the hospital believes is the most up-to-date at the moment and that’s how they would like you to manage it. That’s really, really useful.*

The fact that junior doctors, and new doctors in the WBOP PHO can find locally applicable resources on the Bay Navigator website, is mentioned as a positive characteristic of the BNP.
4.6 Practical implications of the use of Bay Navigator Pathways

There are different aspects to the “know how” of BNP. The first aspect is gaining knowledge, which is acquired through various activities. The other important aspect of the “know how” is the utility of BNP – the skill to apply knowledge of the pathways and to use BNP in day to day practice.

Interviewees had much to say about their experiences with obtaining the knowledge of the Bay Navigator Pathways. Included among the ways they learned about the BNP were the online newsletter, meetings, visits from the GP liaison to their practice, and being involved in review of Pathways. Many interviewees noted that acquiring knowledge required commitment and time set aside for browsing the website, or through bits of knowledge picked up from colleagues and other health professionals. They also mentioned several unique barriers and facilitators associated with the acquisition of knowledge of the BNP which will be discussed in the section that follows.

4.6.1 The “know how” - acquiring knowledge

Passive acquisition, where interviewees spent time to browse the Bay Navigator Website, seems to be a common way to gain knowledge about the BNP. Interviewees describe different triggers that might result in browsing the BNP website. When opening the website to look at a specific pathway, incidental knowledge about other pathways were often mentioned as way of getting to know what is available.

Participant 15: ...if you happen to go on for one reason, you might happen to see they got a pathway about blablabla, or they’ve got some patient resources on something, or referral guidelines and I just might happen to click on them.

Some participants mentioned that they have a quick look at the pathways on the website prior to referral, to confirm completeness of the information and referral

Participant 14: Before I commit to referring I’ll just have a quick glance at it and make sure I have all...

However, one participant felt this is difficult to do because browsing the website is time consuming and therefore not used as much as intended.

Participant 7: To some extent, even with a specific condition, it’s quite difficult to look it up then and there...
A change in the rules regarding how time for education can be claimed through the Maintenance of Professional Standards (MOPS) system could potentially be a motivating factor for GPs to browse the Bay Navigator Website and pathways, and to claim the time as self directed learning.

Participant 9: *Claim this towards your MOPS points. I think that would allow people to do them themselves and learn how to navigate their way around the pathways, which are quite complicated and not straightforward. If you don’t know it’s there, you can’t look at it.*

However, as one participant noted, this would need to be done consistently.

Participant 4: *To do the pathways justice, you probably want to set aside probably a half hour a week of your time to just peruse the website and click on things that may be of interest to your practice. Do I do that? No. Should I? Yes, in an ideal world.*

### 4.6.2 Acquiring knowledge through the electronic newsletter

Technology makes the dissemination of knowledge easier. An electronic newsletter was mentioned as a way to update knowledge on BNP.

Participant 4: *...newsletter comes out through our GP liaison service with either announcement of new pathways that have gone live, how to access them, and so yeah, I read the Navigator...*

A suggestion by participants to have email reminders to update GPs if there have been changes or updates, indicates that electronic newsletter might not be read. Information overload is another issue mentioned by some participants and this also can crease difficulties in keeping up with changes or additions to pathway. A short email to alert the users could act as a memory trigger, so that when a patient present with a similar issue, the GP can look up the named pathway and act accordingly.

Participant 12: *...short little email alert saying this has been added. Or even if you didn’t look at it, if you remembered and someone come in with something, you can go, “Oh, I think that’s on the Bay Navigator..*.

Receiving the information, does not consistently indicate that it will be integrated and implemented. GPs should have systems in place for tasks that can be done at a later time, without overlooking such tasks. Time management should involve putting time aside allocated to completing such tasks.
Participant 5: *...but it still involves you sitting down, reading it, working your way through it. That’s another unit of time, whatever that happens to be.*

4.6.3 “Know how” through education meetings

After completion of a pathway development process, the PHO hosts an education evening, inviting the GPs and healthcare professionals to the meeting. The meetings, sometimes referred to as “lectures” by interviewees, were attended inconsistently throughout the cohort of interviewees. Multiple barriers were mentioned in regards to these meetings. A few practices had innovative ways around attendance. Good collegial relationships and division of responsibility were paramount to involve the whole practice team to gain maximum benefit for all.

Participant 14: *everyone didn’t go for the same. So one person went and informed us if there was anything new.*

Participant 7: *you can speak to your colleagues who have been. There are often very good handouts.*

Advantages of attendance were summarized well by the following interviewee.

Participant 7: *You get CME points for it. You get to meet the local consultants. I think as a doctor, you’ve got to have your own professionalism. You have to sometimes go to stuff that is awkward just for the benefit of your own education and your patients.*

During the educational meetings, GPs have the opportunity to see the GPs involved in the pathway development, and to get an idea as to why the pathway was shaped in the particular way. Frequently mentioned by interviewees, is the value of having expertise in the speciality at the meetings that can lead part of the meeting and are available for question and answer sessions.

Participant 9: *[Specialist] was talking and that was very useful to hear what she thought and have that question and answer that we were able to have at the meeting.*

Interviewees were “not excited” about attending the meetings, and various barriers to attendance were aired. Discussion about appropriate time for such meetings, saw some suggestions for it being held during the day (issues driving at night and being too tired at night after a full day at work), to others feeling that it should be held at a later hour at night (due to first finishing paperwork prior to attending meetings) or having the meetings as soon as surgery ends, but then to supply sufficient food to sustain attendees until they go home.
after the meeting. Requests for repeated sessions in consecutive weeks and having the meetings at a venue to include semi-rural and rural GPs are other thoughts. Having a list of intended meetings available was suggested so that attendees could diarise the meeting well in advance. Meetings where attendees were unable to read or see the data projected, left an interviewee disappointed, while another interviewees complained about the format of the meetings and the amount of information delivered during the meetings. The overall trend is summarized well by an interviewee.

Participant 6:  *If you’re lucky, you’ll get to it.* [omitted] *As I say, hit and miss I believe. Keeping up is always a stretch with a generalist.*

4.6.4 Learning through “osmosis” (term used by Participant 6)

“Osmosis” is the process by which knowledge is acquired both actively and passively through pursuing available opportunities in day to day work. This was accomplished with various successes by the interviewees and their practice teams.

Participant 10:  *...we will know where to turn to as a group, because we all know that he, for example, has been involved in that pathway.*

Participant 15:  *...we definitely share that kind of information either in just the tea room or at the peer group.*

Participant 11:  *You learn a little more from the registrar than you teach the registrar at the time I’m sure we took a look through to see what was there.*

Participant 9:  *...each doctor having responsibility for looking at a pathway and then presenting it, we actually ended up discussing case histories relevant to the pathway as well...*

A prerequisite for “osmosis” to be a source of knowledge, is working within a supportive work community, and being alert for triggers that can lead to gaining new knowledge.

4.6.5 “Know how” through practice visits by GP liaison

This was an uncommon occurrence, and although deemed a great idea by some participants, was met with scepticism around practicality.

Participant 5:  *Somebody coming to visit the practice is again a perfectly rounded way of doing things provided you can then work out the logistics of them coming when there are enough people around to justify somebody coming and doing a visit. The right time, all the usual things.*

Where achieved, the impact was worth the effort.
Participant 6:  [GP Liaison] was really good at clarifying that. She’s got passion about it, which is lovely, good to see, good GP – passion.

4.6.6 Knowledge through reviewing Pathways

One interviewee mentioned being asked to review a Pathway.

Participant 1:  I have been a reviewer of the pathway, so I pretty well understand what they have said.

4.6.7 “Know how” applied in practical use of BNP

To use the Bay Navigator Pathways, there must be a combination of knowledge of the Pathway, technology adapted to integrate the BNP into your practice setting and the willingness of the GP to “give it a go.”

The nuance that there might be a difference between the skill to use the BNP and the knowledge of the existence of BNP, was expressed by a participant.

Participant 9:  ...if you want to know how to use Bay Navigator you need to sit down and do it, not go to a meeting.

Another participant suggested that GPs must integrate the BNP within their bigger framework of expertise, the “clinical toolbox.” The BNP has resulted in many previously secondary level tests and investigations becoming available to GPs. Being realistic about such expectations should prevent disappointment. Scientific data to guide necessity of tests and investigations should remain the main concern, within the reality of the available budget.

Having an icon on the desktop is valued by interviewees for its ease of access that promotes the use of the BNP.

Participant 12:  I normally use it on tab, we’ve got a tab on our MedTech for Bay Navigator.

Having their practice software adapted to integrate easy access to Bay Navigator Pathways and electronic referrals that were adapted to reflect the prerequisites of the BNP, subtly remind the user to employ the Bay Navigator Pathways. Making BNP part of everyday practice, and integrating the BNP within the eReferral system, seemed to be appreciated by interviewees.

Participant 7:  You don’t actually need to refer to the colorectal pathway because it’s already on your electronic referral.
4.6.8 Use of BNP as part of a “clinical toolbox” [phrase used by Participant 11]

GPs have to deal with a huge variety of conditions and situation on a daily basis. There is an enormous amount of information and situations that can present – some of these will present frequently, others are a once in a lifetime occurrence. An interviewee referred to the accumulated subconscious knowledge to face the daily demands as having a “clinical toolbox”. The pathways, information and services on offer on the Bay Navigator Website should be integrated into the clinical toolbox of the WBOP PHO GP. Diagnoses of a named condition should trigger the memory of the treating GP to use the BNP. Having templates for some of the letters that have to be written, and contact details at hand, was time saving according to a participant.

Participant 11: Sort of like a toolbox, isn’t it? Lots of things, in the end which ones you pull out when is part of the skill.

Participant 11: It is a good place when you go looking for something. I wasn’t sure about the dementia assessment for power of attorney but I found it there once I went looking. It was useful.

Unmet expectations about what the BNP should allow GPs to do, could be an issue for some participants.

Participant 9: ...with the hope I was going to be able to order lots of DEXA scans but I was sorely disappointed.

Participant 3: If there’s something that’s worrying me in the pathway it isn’t sort of given me an adequate answer [omitted] I’d probably just right straight through to speak to the on call, just to get a bit of advice on what to do.

4.7 Resistance to use

With many demands to the time and attention of the GPs, the BNP are sometimes a low priority. Many of the interviewees displayed a lack of knowledge about the pathways, with interviewees not knowing about well established pathways e.g. diabetes and orthopaedic pathways. A new GP in town explained that the practice information handbook mentioned the BNP, but the interviewee had no introduction to the system by practice management.
Barriers and facilitators towards aspects of use and knowledge dissemination have been discussed above. However, a sense of resistance against the BNP in general surfaced in some interviews. Some interviewees felt that it was not worth the time and attention spent to pursue using the BNP.

Participant 8:  *Pretty much no guidance and probably six to nine months since I tried. I basically don’t anymore.*

One interviewee had questions about the Pathway development process, and the transparency and adequacy of this.

Participant 5:  *A complete change in the system of how things were managed at the moment to introducing something which, on the face of it, had already been agreed as a pathway. I was unaware that any of that was taking place. [omitted] I think we were all a bit ambushed by that particular pathway.*

Another interviewee described a feeling of objection to the BNP in relation to strained interaction with the hospital that the BNP created.

Participant 14:  *In the very beginning, once or twice, you do the referral. I learnt the hard way if you miss one thing or something, you get a letter back saying...asking you to do a certain thing, or “Not enough information”. And see it forces you to go back, the letter that recommends that you do the pathway...*

A sense that the rationale for the BNP is unnecessary, and that general practice can continue without using BNP, was evident in some interviews.

Participant 2:  ...we generally feel that we are all individuals and we all practice differently. So, there’s certainly a feel although some things are definite guidelines that you must do, there’s a lot of grey. If you don’t follow the correct pathway we’re not totally worried about that as long as the care is appropriate and the best for the patient.

Participant 4:  *as a GP wanting to get the quickest, most efficient comprehensive care for your patient, I’m a little bit old fashioned. I think a lot of...if you’ve got some experience behind you, you don’t have to go through a pathway to try and get your patient the best care. I can understand and I do recognize the value of having as much pre-consultant assessment done in the community certainly, but yes, it’s a huge breadth of information out there.*
The dissemination of knowledge about the Bay Navigator Pathways is variable with opportunities for specific education which is not uniformly acceptable and littered with attendance barriers.

4.8 Conclusion

In this chapter the demographics of participating GPs shed light on the appropriateness of the cohort.

Knowledge acquisition and use of technology imbedded in the Pathways were issues for participants. Resistance to the Bay Navigator Pathways was recognised as important because it will have impact on the interviewees’ encounter of the process of persuasion and maintenance of use of the Bay Navigator Pathways.
Chapter 5 – Results: Theme 2 – Persuasion/Decision

General practitioners’ knowledge of the aim of the Bay Navigator Pathways, as well as how they were introduced to the concept and practicalities of use of the Bay Navigator pathways were discussed in the previous chapter.

In this chapter, the multi-layered process of persuading the general practitioner to commence the use of Bay Navigator Pathways (BNP) is discussed. The factors that were mentioned by GPs in the interview process were centred around three elements: the effect that the BNP will have on the everyday general practice activities, the effect that BNP will have on patients’ care and the interface between primary and secondary care services. A wide range of barriers and facilitators were experienced by interviewees during the decision making process. This chapter aim to contextualise this multi-factorial process within the Diffusion of Innovation framework described in Chapter Three.

5.1 Persuasion and decision

To get an understanding of how the interviewees moved from knowing about the BNP to implementing the BNP, was difficult in retrospect. A prompt was put to the interviewees directed towards their use of BNP. This opened up the opportunity to prompt interviewees about reasons for use or non-use, and the factors that influenced them to use or not to use the Bay Navigator Pathways. Interviewees talked freely about the difficulties that they experienced and technology that they had to master in order to implement the BNP. Many of the barriers and facilitators that were mentioned only came to light once the interviewees tried to use the BNP. The circular movement of persuasion, followed by attempted implementation that led to failure and review of the situation with adaption and retrial of BNP, was visible through the narrative of some of the interviewees. Interviewees’ decisions and opinions were mainly tailored around barriers and facilitators to general practice aspects of the persuasion process. Therefore the effect on general practice section will be
discussed according to themes that emerged from the data. Barriers and facilitators to the decision to use the Bay Navigator Pathways in General practice will be discussed separately.

5.1.1 Barriers to a decision to use BNP in general practice
The philosophy of the BNP is to create one system with one budget and primary care central in the health system. The whole system change may take years to showcase its value. In the interim, GPs should use BNP.

Participant 1: *We are a lot closer to being one system one budget than we ever were, and we just need to keep working on it.*

5.1.1.1 Barriers to persuasion relating the general practitioner
Traditions in general practice are well established. There are time-honoured ways of doing things. Interfering with this “steady state” where each relatively autonomous GP delivers a service and serve the community to the best of their ability, will cause rippling on the already busy GP’s sailing water. BNP were viewed with suspicion.

Participant 6: *I’m a little untrusting of some of it. Also, there needs to be an awareness of is this going to...How big is this going to be and how much cost and time for a workforce that is actually pretty honest, pretty hard working, does a lot of work for free and does a lot of subsidizing who is not seen and not really accounted for. I think if we’re not careful, we may just be seen as a place to quietly shift costs.*

One interviewee felt that Bay Navigator Pathways were narrow in their scope and too perscriptive. From the onset when the concept of the Bay Navigator Pathways was introduced, GPs had concerns that Pathways could not adequately cover the diversity of patient presentations and patient requirements. The concept of “cookbook medicine”, where patients are to fit within pre-formulated pathways, is evident in the comment.

Participant 8: *I still find that someone who’s a mother or someone who’s at school and has three or four days off at a time [due to tonsillitis] even if it’s happening three times a year, I think personally [they]should have their tonsils out because they are an ongoing problem, as opposed to a three year old where they might grow out of it. I don’t find that one size fits all with health.*

Many interviewees commented on the time pressure which is part of everyday general practice. Apart from the time spent in consultation, GPs have a heavy burden of paperwork and patient administration that needs their full attention as well as the requirements of
running a business, together with the staff and financial pressures that it creates. A common theme in interviews was the fact that GPs had a hefty workload with many demands on their time.

Participant 14: We can be so busy.

Participant 2: You’re not only trying to juggle a full time role as a [omitted] GP, but sorting out issues around building code of compliance, how financial reports are due with the auditors, all that sort of stuff has to be done.

Participant 6: I hate waste. I don’t like my time being wasted. I don’t like impractical formulaic administration. It’s just not good. I will resist that.

As noted in the previous chapter, when evaluating a new innovation, the GP has to weigh up the advantages and the disadvantages of incorporating the Bay Navigator Pathways into everyday practice.

GP employment arrangements vary, with some GP working limited hours in the same practice, or working as locums in different practice. Some locums will spend limited time in practice due to other responsibilities. Some interviewees felt that their employment conditions make the BNP less applicable to them as they do not have to take responsibility for chronic care.

Participant 12: ...not having a strong patient base of my own, that I suppose I don’t necessarily get a good sense of when the system is falling down for people either, if you don’t have a good handle on what the long term issues are.

Human beings are creatures of habit. GPs have relative fixed patterns in which they address their daily work routine. Work routine gives GPs a sense of security in completeness of their practice. Delaying completing a task can lead to omitting to complete such a task [Participant 6]. Changing the set routine is a barrier.

Participant 6: I’ve gotten into a pattern over the years of writing a letter. I can be very efficient in that. Part of me is a little bit sad that my efficiency will be challenged by the BNP.

Participant 2: Although it’s a bit frustrating and delays the job you have to have it sitting on your task bar as an extra job to do....
Interviewees also felt that that BNP added extra work, without remuneration and personal loss of income due to the restructuring created by the emphasis on services provided in primary rather than secondary care.

Participant 1: ....so if someone says [name omitted] could you please do this extra task, in a business that is not publicly funded but is privately funded by capital why should [own name omitted]’s family pay for the extra service that the District Health Board is no longer providing?

Professionalism: BNP should get each GP to reflect on their own practice and to review their own practice. It can be a difficult process to do critical reflection on your daily routines and service delivery.

Participant 10: You have to be open to...you have to be this little person who’s open to challenging your own practice.

General practitioners should be aware of changes in medical evidence and the need for ongoing improvement in practice. GPs are challenged to reflect and this can cause a defensive mode from which persuasion to use BNP are difficult.

It is obvious that the self of the GP is a barrier to persuasion to use the BNP. Although personality analyses of interviewees were not part of the research project, it is expected that some GPs will be more resistant to change. Interviewees described different emotions created by the BNP.

Annoyed

Participant 4: ... an annoyance because it’s more bloody work

Disempowered

Participant 2: And they don’t allow for us to make that judgement...

Overwhelmed

Participant 9: How can I possibly know all of this?

Coerced

Participant 5: You’re forced to use it.

Disappointed

Participant 7: ...you almost want to learn something new
Punished

Participant 5: People who might be classed as good GPs might feel that they’re being punished unnecessarily because of people who make ‘please see and do as necessary’ type referrals without adequate information in them.

Intimidated

Participant 11: ...it feels like they’re saying that this is the only way in, we only want you in this way and if you don’t fit in this way they may not be interested in seeing you.

This concludes a summary of interviewees’ impressions of the barriers that they faced in the process of persuasion to use the BNP in relation to their work as general practitioners and their daily routine in general practice. Most GP perceive the Bay Navigator Pathways as being locally developed, but implementation will increase if the development team include somebody that are deemed “internal” to the group. The lead GP in each pathway development program has an important role to play to get the rest of the GP workforce to accept the pathway development as an internal process.

When interviewees talked about their path of persuasion to try to use the BNP, issues relating the Pathways were highlighted. These will now be discussed.

5.1.1.2 Persuasion barriers relating to the Pathways and the format of Pathways

In Chapter 4 knowledge of the Bay Navigator Pathways barriers and facilitators were discussed. Knowing about the existence and the aims of the Bay Navigator Pathways is paramount. Another Pathway programme, called the Map of Medicine, is widely accepted and used in the Waikato region. Some interviewees expressed confusion about the Map of Medicine and Bay Navigator Pathways, both of which are endorsed for use within the Bay Of Plenty PHO.

Interviewees frequently struggled to see the rationale for having two systems running parallel, uncertain about the interaction or overlapping of the two pathways.

Participant 2: ...I found the Map of Medicine one really good. Is that incorporated into the Bay Navigator, or not?

Participant 13: I think they need to make it clear that you’re either using one or the other. I think giving us the option for both makes it confusing.
Several aspects of the BNP website and the navigation thereof drew comments from interviewees. To be able to access the BNP, practices can install a shortcut link on their operating systems. Alternatively a search engine can be used to find the Bay Navigator website. This website was revamped early in 2015. The Bay Navigator pathways have a link on the Bay Navigator Website. Some interviewees expressed issues to find the Pathways or the information section on the website.

Participant 12: …some months ago, trying to find the TIA pathway and taking a while, but this time I could find it.

Participant 8: …often I had to re-navigate the BNP to get through to referral criteria sometimes.

Other interviewees had difficulties to find a specific pathway.

Participant 9: Fragility fractures is under fragility fractures and not under osteoporosis, which is where I would look at it.

Interviewees had mixed response to the website change.

Participant 9: Then they changed the program. The newer program has got too much in it and some links that don’t work.

Compared to

Participant 15: Although, it’s better now than it was. I think it’s been updated. And it’s better. Definitely better.

Participant 13: Since they’ve upgraded it, it’s better, because it was quite clunky to start with.

The Bay Navigator Pathways on the new Bay Navigator Website was scrutinised by participants and said to have developmental and technology glitches. Such imperfections can affect the users’ impression of the website as a whole. It is important that all glitches are reported and mended to improve ongoing confidence in and use of the Website.

Interviewees had much to say about the format and presentation of the pathways on the website.

Participant 15: Compared to some websites it just looks a bit childish. It’s just not nice to look at. Or particularly easy to navigate.

Participant 5: There are just so many boxes within. It’s too big to be something that you can use in your consultation I suppose.

Participant 11: I find it annoying the little squares you have to keep opening up.
Participant 12: Some of the format stuff is a little bit tricky, even how to move around. It opens up in a small window for us. It cuts part of it off and then just the physical trying to move stuff around, how do you see what’s down this corner...

Persuading GPs to use the website and the pathways will need addressing these issues.

There were comments from interviewees relating their acceptance of specific pathways. This ranged from questions about relevance to the evidence behind the pathway.

Participant 7: ...the menorrhagia pathway, there’s not really a lot on that that I find overly helpful

Participant 10: I’m a little suspicious of the X-ray pathway, but I think even that’s based on best practice.

Some pathways were deemed to be static, and unable to be used in some clinical situations.

Participant 8: It doesn’t always fit in with what the picture I’m trying to portray. Sometimes it does, but sometimes it doesn’t.

An interviewee pointed out those BNP would need to be reviewed and updated, and audited against its usefulness and applicability in general practice.

Participant 1: ...is to go back and look carefully at...are some of the early pathways that were put together still fully relevant? Is that still how we are going to do here? Are the secondary clinicians actually engaging, do practices actually engage?

Pathways should help GPs to deliver excellence in health care. Concerns about the pathways interfering in consultation aspects will deter GPs from using the pathways. Some interviewees felt that the pathways prevent timely referral.

Participant 3: It’s not helpful because we can’t always wait until they meet the criteria to start finding out what’s going on, so that’s one of the reasons I stopped looking into that.

Participant 14: When it comes to cancer, if I feel that this patient needs to go, then I tend not to go and look at what pathway or not, I just send the referral through.

Most interviewees found some information, required by BNP, was not been obtained during consultation. A telephone call from the doctor or nurse would in most cases be sufficient to obtain the information, but in some cases the patient had to return for a follow up visit. Some interviewees express more frustration due to that, while others are more philosophical or take it as a learning curve.
Participant 13: You just have to learn what’s on there.

Participant 14: In the beginning, once or twice you do the referral...I learnt the hard way...

Pathways are not consistently integrated into electronic referral forms. With pathway integrated referral forms, interviewees mentioned difficulty to apply the access criteria to individual patients.

Participant 11: An ultrasound for a hernia in a child and there was no criteria— you could find ultrasound for a child wouldn’t fit any of the criteria...

A whole array of issues with the tick box format of the Pathway integrated referral forms was mentioned.

Participant 15: You just tick. I think that’s wrong. You should tell them what you’re looking for. You should tell them what the problem is. I think we need more free text. We can’t rely on all tick boxes.

Participant 13: Really, I guess, just that you have a couple of clicks to go through. But that’s in my setting, where you need to go through it quickly...

Participant 14: The question is whether you’re gonna go and look and ‘tick’ and ‘tick’ and put all the information, or rather an easier thing. The problem is the time constraints...

Some interviewees make specific note of the difficulty to park and later retrieve uncompleted pathway integrated eReferrals.

Participant 5: I believe you can park things, but you think if I do that I may never see him again or where do I find them again?

Participant 7: I’m not sure whether I should be able to do it, but as far as I know, you can’t park the form to be completed later, and reactivate it; at least I’ve not learnt how to do that...

One interviewee had been successfully persuaded to implement BNP but decided not to use the integrated pathway eReferral. The reasons for the decision are captured in the following comment.

Participant 14: I feel as long it’s all written down in your notes, and it’s easy to read and follow, I think that’s probably good enough, as opposed to trying to split it up in different boxes and this and that. To me, I don’t like doing that.
The cycle of persuasion, where issues identified in the pathways can be reviewed and corrected, may have been a positive persuasion factor for this participant. Some reinvention suggestions will be discussed in the next chapter. Participants expect that they will need to regularly update their knowledge of the Pathways as each Pathway is updated.

Participant 4: *Of course, you have to update, because the Pathways will be updated from time to time.*

Participant 15: *So, that would need to be continually updated because it’s changing all the time.*

### 5.1.1.3 Persuasion barriers regarding technology

General practitioners are expected to be computer literate and familiar with patient management software (PMS) packages. Lack of technology confidence proved to be a common barrier for many participants. The BNP have to be accessed on the Bay Navigator Website, although some of the Pathways are integrated into the eReferral system backed by Best Practice Advocacy Centre (BPAC). eReferrals are integrated differently into the operation systems of the practices depending on the software used.

Participant 2: *We have a really, I call it, an antiquated system for our PMS as well. Our Patient Management System is [omitted] and it’s just not user friendly.*

Participant 8: *I think [omitted] can be improved, but that’s a big problem because it’s not supported by... I mean, everything runs through MedTech which is a problem.*

There were many comments about the integration of different practice operating systems with the Bay Navigator Pathways. Easy access to the Pathways through the practice management system should be paramount. Difficulties with access were a common theme.

Participant 7: *...not having to go to a separate web page. Although you could have it sat just behind MedTech it’s still slightly frustrating to click through.*

Participant 11: *As I said a separate program so I have to close down my program and then open it up*

Participant 6: *I suppose the difficulty was when it came to using that other website that wasn’t already MedTech.*

Practices have to provide adequate internet access so that all the desktops can run at speed. This also proved to be a barrier to use.
Participant 14: And internet being slow sometimes, you know to go from one page to the next sometimes can be slow, and you just don’t have the time.

Participant 13: ...for some reason at [omitted], the internet is terrible. I don’t know whether the whole system’s oversubscribed.

Everyday use of the Bay Navigator Pathways was a burden with the technology in place in practices. Using the BNP often interfered with the swift completion of tasks that are technology dependant according to participants.

Participant 8: ...especially if it doesn’t self populate, which some of the ones don’t self populate, and it’s a pain.

Participant 6: ...if your machine runs slow because it’s all bogged down, your day is hell.

Participant 7: One of the main problems is speed of access...

Practices use desktop computers, which have to be updated and replaced with the rapid expansion of technology available.

Participant 13: Some of the systems quite were older, that you’re working on, and that makes it even worse.

5.1.1.4 Organizational barriers

General practices are private enterprises. Interviewees were all in different employment structures related to a general practice. It is important that the management of the general practice are aware of new innovation, and able to evaluate the pros and cons of the innovation with regard to their specific clinic. With a PHO initiative, like BNP, management should be up to date and have systems and training in place for employees that are to use the innovation. Interviewees were not directly prompted about their workplaces’ initiatives, but some interviewees did comment on aspects of organizational influence.

Many interviewees indicated that they adapted their consultation structure to accommodate the BNP. These adaptations may impact on practice organization and need practice management to be aware of these to adjust appointment templates and work schedules.

Participant 11: ...you’re getting that way so you mould your practice around that, organize the consultation and have the test done so that you can try and complete it all in one go.
Management can be proactive in helping staff to be aware and well equipped for new innovation. However, several participants reported that new staff were not consistently informed and trained for using BNP.

Participant 15: *I don’t think my practice is such a high profile that we would have it for a new staff member to see it being in the introduction to hear of it.*

Participant 3: *It was just trial and error. On one of the forms I think, mentioned to check Pathways for details and that’s how I knew about it.*

With BNP being used by GPs, other staff members will also be influenced. Interviewees tasked nurses to chase up information to complete eReferral in cases where information has not been completely collected by the GP due to unfamiliarity with the Bay Navigator Pathway prerequisites.

Participant 3: *I usually give the task to my nurse to ask. That is quite well where I work, you have a support system, you have a nurse, so I just give the message to her, and she is very good.*

Participant 10: *I sometimes just send the nurse a task to ask her to ask them the question. Or I will ring them up myself.*

Interviewees brought up the necessity to continue to deliver good service to patients despite new innovations. Management has to work with general practitioners, nurses, health care assistants and receptionists to implement strategies to consistently deliver excellent service.

Participant 1: *...we rely on happy customers who have had a fair go and keep turning up, so again we are customer focussed in that business sense as well as patient focussed in terms of what is good for your health. But both those things go together.*

Participants suggested that management needed to budget for the impact of the BNP, not only on staff time, but also on equipment and services. Management should plan for improvement of services by budgeting for future expense, as with improvement of technology updates are vital in keeping up to date. Protection of software against malfunction should be at the highest standard. Protection of patient confidentiality through excluded and monitored access to information online is legal expectations. Practices should have IT staff contracted to regularly update the servers, giving guidance to management about possible future expense.

Participant 6: *We just had to replace our servers because actually, these things will use up megagigs. You’ve got seven machines running that all*
Contrary to expectation, there was no indication of expectation of management that BNP should have financial incentives.

Participant 15: *I would say that’s totally separate from the targets and the financial aspect of it.*

Participant 2: *The patient care and having the best care for them and our work environment is a high priority so we would be happy to talk about something that’s got nothing to do with a financial gain.*

5.1.1.5 Medico-legal implications

A repeated message from interviewees is their deep seated interest to do the best for the patient. An important factor when persuading the use of a new innovation is to have built in advantages for lessening the risk of omitting important tasks, which can have medico legal implications. These following elements, which can have medico-legal implications, were mentioned by interviewees as part of their decision making processes when they first encountered the Bay Navigator Pathways.

To reduce risk, the safest process is to complete a task immediately if it comes to hand. Once the patient was verbally informed that a referral will be done to secondary care, the referral has to be drafted, completed and sent off. The sooner a task is created, the sooner it needs attention. Therefore quick and easy referrals were deemed an essential component of everyday practice.

Participant 14: *Unless you do it, before seeing the next patient, you need something to be done within a minute. [omitted] So at least the referral is gone, and you won’t forget to do it, or something may happen. This way you know it’s all done...*

Participant 6: *I think the more complex and when you start to interrupt processes, humanity can interfere with perfection.*

Because the BNP is deemed a new system, some anxiety is evident with some interviewees about the adequacy of their systems in place to safeguard mistakes. Routine becomes a safety net, and with incorporating new systems the change of routine leads to insecurity.

Participant 11: *It’s a task to yourself which you can set and put a few days ahead or a week ahead or whichever is appropriate. Then it just reappears on your to-do list. I think it’s a good safety net in terms of cancer referrals.*
There is currently no inbuilt reminder function of the BNP.

To comply with essential information that needs to be included to fulfil the requirement of the Bay Navigator Pathways, interviewees had to review their practice routine. Without the information the eReferral could not be sent off. Most participants developed new practice routines and had systems in place to deal with delays in completing eReferrals. This process attracted many comments from interviewees.

Participant 12:  When I first started doing it, and I forgot about that. Oh that’s right, you need those values in there. I’ve got to wait.

Participant 8:  I send myself a task saying, “Refer surgical after results back.” And it comes up until I’ve actually dealt with it.

Participant 13:  “Look, I’m going to flag myself as well, so that I don’t forget to do this.”

Interviewees mentioned the importance of motivating the patients to do requested blood tests as soon as possible, as doing the referral depended on results available. Hereby both parties are involved to diminish the chances of forgetting to do the referral. This shared responsibility was addressed in various ways by interviewees.

Participant 11:  If you’ve told a patient to do something and they don’t do it you’re still responsible for chasing them up.

Participant 12:  There used to be a problem where you’d be waiting for days and like, “Hang on, it still hasn’t come through.” Then you have to ring up the patient [omitted] ...but now, as long as I remember to tell patients, I would tell them you need to get this blood test done before I can send the referral.

Other pitfalls with the delay in sending the referral through to the hospital were identified by interviewees.

Participant 6:  There’s the chance for not getting the form done. You might fall sick the next day. The blood count gets filed as normal by your locum. The form is parked. Whether you’ve had a reminder, your light bulb should tell you then.

The risks mentioned by this participant may not be only associated with the use of BNP, but it was mentioned by this interviewee referring specifically to the use of BNP.

Interviewees pointed out other factors in the primary secondary interface that may pose medico legal pitfalls. The BNP should improve access for patients to secondary services in order to avoid the scenario.
Participant 11: ...but to leave it to us and refuse to be seen I think is ethically and morally wrong. Probably open to complaint to the Health and Disability Commission basically that people aren’t being seen. Failure to care or treat.

Returned referral because the Bay Navigator Pathways was not followed, can lead to unnecessary interruption and delay in smooth primary secondary interface. The impact of such a delay can impact on the patient’s health. The question is to whose door such a case will be laid should a medico legal inquest be held?

Participant 9: Didn’t know where to look for it, didn’t know what he had to do, and the patient potentially suffered because he had to put a referral in, which then got rejected and said please look at the guidelines.

Contrary to the fears mentioned already, a participant noted that the BNP can be a confirmation of appropriate care delivery.

Participant 1: ...answer to the judge’s question, “Dr. [omitted] why did you do this?”, the answer is “Because my colleagues suggested this would be the right way to go.”

Any decision making process is a combination of positive and negative factors, which are personalised within the setting of the person making the decision. The preceding section illustrates the barriers that participants experienced when going through the process of persuasion and decision to use the Bay Navigator Pathways as a new innovation. The discussion that follows will be about the facilitating attributes of the BNP, which were taken into account by interviewees.

5.1.2 Facilitators to persuasion and decision

The decision to use the Bay Navigator Pathways may impact the GP, the patient and the primary to secondary services. Essential processes of decision making, guidance application and ease of access to information, happen consciously or subconsciously on a daily basis in the work environment of the GP. The personality traits of the GP may also affect the persuasion process. If the BNP can easily integrate in to the daily routines of the GP, it will affect the decision of GP to incorporate such pathways.

Most interviewees remarked on how they perceived that the BNP might ease aspects of their daily work, and this is discussed next.
5.1.2.1 Factors that increased interviewed GP’s decision to use the BNP

The bigger picture of health care delivery should be a motivating factor in the decision to use BNP.

Participant 10:  *Because not only do they provide up to date knowledge, they also provide information on how the hospital and primary care interfaces with each other. It’s useful for everyone I think.*

The discussion on facilitators for GP use of BNP will be around the themes of referral, the BNP as a guide and the effect of BNP in clinical decision making. It will address the counter argument on some of the previously discussed barriers to use of BNP, mentioned in the previous section.

The Bay Navigator Pathways may support GPs in their decision making responsibilities. Medicine is an ever changing science. Interviewees mentioned that the BNP can act as a quick reference, which is easily accessible and locally approved. If there is doubt about the best line of action towards a referral, then BNP clarify and direct the referral action. The GP can be reassured that the actions taken in the patient management plan, is according to the local specialists’ preferred path which then clarifies responsibility and hand over of care and management in an appropriate manner. The following quotations illustrate the facilitating effects of the BNP for GPs:

Clear directives

Participant 12:  *Very useful because it gives you kind of a clear directive about if you get this and this then you need to refer to the hospital acutely versus referring to clinic outpatients.*

Quick reference

Participant 13:  *...because you could easily pull it up while you were talking to the patient. Chit Chat, and flip things up, and be typing, and them not necessarily be aware that you’re quickly referring to a pathway.*

Reassuring

Participant 9:  *It’s also helpful to you, you can kind of go this patient only had diarrhoea for a week, why am I worrying, because it’s not 6 weeks.*

Directive
Participant 6: *It can give you some guidance. Like if you’re getting stuck, undecided or if you’re on the fence as to whether or not you should send this patient to the hospital or not.*

Doing a referral is a part of shared decision making process: with the patient, secondary and primary as role players. The referral process however can be littered with pitfalls and the BNP may facilitate this interaction in positive ways. It can reduce the demand on the GP and empowers the GP by providing prerequisites and direction which is situated outside of the doctor and the patient. Pathways can help GPs to guide patients towards the need of referral as the following quote indicates.

Participant 13: *For you, as a GP, it gives you that little bit of empowerment to not feel pushed into having to do an unnecessary referral, or maybe being felt as if you’re not doing a good job.*

Once referred, all information will be on the referral letter, which enhances the chances of the referral being accepted.

Participant 10: *You’re less likely to get the declined referral letter which everybody hates. Because you know that the information that they require is in there.*

Being ready formatted and having the BNP guidance, it can simplify the actual referral letter.

Participant 13: *It’s easy to do from our perspective. You just have to learn what’s on there.*

Using the Pathway formatted eReferral can also adequately portray the urgency of the referral to secondary care so that it can be given appropriate grading at secondary level.

Participant 4: *...but from a general practice point of view, a great sense of comfort, because you have initially started the referral with a high degree of urgency.*

The patients’ clinical situation can be adequately explained, even on the standard eReferral, to allow for specific circumstances or to highlight co-morbidities.

Participant 7: *...the actual referral is there’s still your free text box and page where you can put the extenuating circumstances...*

There are many things (such as compliance and administration) that GPs accept as necessities of current practice. One participant suggested that using the BNP, should be one of those things.

Participant 1: *Where I see it coming down to is why do I now refer into the hospital electronically through Best Practice? Because I have to.*
Another interviewee felt that having the electronic version of the BNP, was useful because it was much easier and more time efficient to open a computer based form to be filled, rather than having to find, manually complete and mail or fax off a paper based form.

Participant 11: At least it’s all electronic you’re not filling in forms so I think it’s a good thing.

BNP can also facilitate better communication and understanding between GPs and specialists.

Participant 10: Actually one of the big benefits is getting primary and secondary care to work together. Because there are too many cultural barriers between primary and secondary care, they do help break those down.

The Bay Navigator Website has a patient portal, called Clinical health information portal (CHIP), through which GPs have access to hospital notes and information on patient appointments or discharge notes. Éclair is similar but allows GPs access to all laboratory and radiology results. One participant felt that keeping track of the patient’s journey while in hospital, helped to keep the GP in the loop.

Another factor that can enhance the acceptance and motivate the GP to decide to trial the BNP is that the BNP can act as a centralised manual. In this regards some facilitating characteristics of the BNP were mentioned by interviewees:

Bay Navigator Pathways as a hub where GPs can obtain centralised information.

Participant 12: I think if you’ve got something that’s in one place, like the Bay Navigator website, it being one place that you can go to where you can look at what the referral systems is, I think it’s going to make it a lot easier for people.

Participant 1: And it really comes down to how quickly can you click it up, rather than either you know Googling it or whatever, because what we are wanting is what have our clinicians filtered through...

Another advantage is that there are no loose bits of paper that can get lost, and the system is ready for use in one place.

Participant 7: ...the MOCA form there to do the memory test, so you don’t have to go ferreting around in drawers to find your sheet. You just click on it and print it out, so everything is all in one place.
As mentioned previously, BNP are an excellent resource for new GPs and GPs new in the area. This view expressed by participants were quoted earlier, and will not be repeated here.

Contrary to some interviewees expressing negative notions about the format of the BNP, there was also some positive remark about this. For the interviewee below, the tick box format resonated as it saved time and enhanced the processing of the referral at the receiver end, for quicker appointment allocation for the patient.

Participant 13: *I’ve heard other GPs complain that they have to fill in these stupid forms, but I think they’re very sensible. It’s making it easier for everybody.*

Although the personality traits of interviewed GPs were not explored, numerous GPs expressed feelings elicited during the process of persuasion. General practitioners should keep up with medical knowledge and continue to evaluate their own practice by means of audit and reflection.

Informed and confident

Participant 7: *...now I know the right steps to take, so it informs me and makes me feel confident in my practice...*

Confidence

Participant 1: *Confidence, yes, this is what my colleagues in general practice and my colleagues in the hospital have got together...*

Self directed learning

Participant 3: *It could be kind of a learning thing for GPs as well...*

Participant 10: *I do find them educative.*

Comfortable

Participant 10: *...find them helpful, because it makes me comfortable. I haven’t forgotten anything.*

Excellence in general practice

Participant 6: *I found I’d done a more thorough job.*

Trusting

Participant 14: *I would still use it probably as guidance, because I trust it, people tend to stick to what they know.*
It was apparent that participating GPs do value the BNP as a potential positive attribute to their practice and practice routines. The positive spinoffs on confidence in managing and treating patients adequately can lead to improved implementation of the pathways.

5.1.2.2 Persuasion facilitators regarding the pathways

Interviewees described several persuasive facilitators with regard to their decision to use the BNP; including the business of being efficient in managing and referring patients, as well as the BNP’s effects to streamline daily duties.

Persuasion facilitators regarding efficient patient management

Participant 15: *I actually quite like the website based ones because of the way I look up information. [omitted] You can just click on it and remind you and refresh certain things. But, I think it’s also good if it’s a referral if you can access the information while you’re going through you can open up a separate box and access more information about or explanation about, why you are filling in a certain part of the referral.*

The aspects mentioned by this interviewee, were echoed and expanded by other interviewees.

Information

Participant 14: *...have a browse through the different things. Not necessarily to refer, but to see what the recommendations are for the various things. Just for my own purpose.*

Prompt

Participant 7: *...all of the blood test that you will remember ninety percent of them and you will forget ten percent. [omitted] It has improved my clinical care by not missing a blood test and having to ask the patient to go back.*

Reminder

Participant 4: *Certain things that you don’t do terribly often such as a sleep apnoea referral...[omitted] Those are the types of things I would look at.*

Integrated referral

Participant 7: *...because it is integrated within the clinical system, it’s really, really useful.*

Access to information
Participant 6: *I could quickly get what test they wanted and some questionnaires about driving.*

BNP need to be integrated into daily practice routines, and not remain an “added extra” to the workload. Some of the interviewees considered how they could normalize the BNP as part of their work routine.

Participant 11: *You’re getting that way so you mould your practice around that...*

Participant 6: *You’ll actually start to almost remember the form once you’ve done it a few times. You’ll be asking specific questions – like when you’re working at night.*

To persuade GPs to use a new innovation, it must be user friendly.

Participant 12: *It’s reasonably straightforward.*

Technology is a reality of daily practice. Persuasion to use will be dependent on trouble free integration with practice systems.

Participant 4: *With regard to the technology, I’ve had no difficulties. I find the instructions for use quite clear. To navigate your way through each domain or each page is quite easy.*

Due to the pressure in daily practice, an innovation that saves time is highly likely to be accepted.

Participant 13: *...save a potential wasted phone call, or upgrade it to a “You must make this phone call...*

Participant 5: *...if you meet the criteria you haven’t got to put a lot of extra information in.*

As illustrated in the discussion on the barriers and facilitators that may persuade general practice to use the BNP, there are conflicting perspectives among participants. Some aspects of the BNP remain open to the role players to interpret and access in the light of their own practice milieu, personality and preparedness to change.

### 5.1.3 Persuasion to use of BNP: barriers and facilitating factors related to patient care

Doing the best for the patient is the mainstay of general practice. Therefore, GPs are more likely to be persuaded to use BNP, if BNP can contribute towards this goal.

Patients may present with multiple concerns, which cause disorganisation within consultation. In such a consultation, it can be hard to tease out the most important issue to
attend to. If the GP tries to do everything during the 15min consultation, it may lead to missed essential information.

Participant 9: ... the patient came in with two other problems both of which needed referral and then his wife said, by the way, his memory’s absolutely awful and always has been.

Another point raised by participants is that patients do not always present as written in the textbooks.

Participant 3: ...suspect cholelitisasis, instead of having pain on the right side, they might have pain in the left side...

Participant 15: ...sometimes patients’ symptoms or signs just don’t fit into the standard groups...

The patients are frequently supported by their whanau. Between the patient and their whanau there may be different expectations about how the GP should manage the condition.

Participant 13: Some of them have unrealistic expectations of how they want their loved one managed.

Participant 14: ...because the patients come in with the expectation of wanting to be referred...[omitted]...you can experience some resistance there from the patient’s side.

However, having the BNP can offer the patient insight in the process of their care and improve their assurance in their management being correct.

Participant 13: Okay, we have a process, and I can see where this doctor’s going with it. They’re not just fobbing me off.

Patients and their families also have their community and community services that can support them in their road to recovery. Having the BNP reminding the GP about the existence, and keeping the GP up to date with new or changed services, can optimise the contribution of agencies and services to the patient.

Participant 15: There’s just so many groups providing different services and it’s now next to impossible to keep up with who’s providing for who, who’s eligible for what.

BNP can assist in utilizing the myriad of services appropriately to the patients’ condition.

Participant 7: ...very helpful for leaflets for referral to the Alzheimers’ Society, reminding you to have a check list to do the driver’s referral and the supportnet referral.
It was evident that the interaction between the GP, the patient, their family and the community must all be working in harmony to be able to serve the health of the patient for the best. These interactions are frequently built on trust. Some interviewees mentioned concerns about the effect on the BNP on the goodwill between the GP and patient.

Participant 5:  
*It’s not quite so nice for the patient having someone ring you, “Oh, by the way, the doctor forgot to ask.”*

On the contrary, the GP working through the pathways may enhance the trust in the doctor patient relationship.

Participant 6:  
*I think the patient, depending on the patient, will think this is the system. The doctor is being thorough. He’s working through the process.*

Shared care, where the GP, the patient and the hospital interface, has to run smooth to assure the best for the patient. Interviewees anticipated that BNP can cause ructions in the shared care process.

Participant 5:  
*Other people are more angry about it. They pay their taxes and they should get a service. Other people who say, well, you mustn’t have told them enough, doctor.*

However, shared care may be more transparent to patients if they have knowledge of the BNP.

Participant 13:  
*Personally, myself, if I had an issue that wasn’t going to be dealt with today, but I was shown that there was a pathway that I was on, and that that was the DHB’s preferred referral process, or a management process, the I’d be a lot happier...*

The waiting times for patients between primary and secondary care providers, were mentioned. With the BNP in place, one interviewee was carefully optimistic about improving waiting times.

Participant 6:  
*I think in terms of patient outcomes, I think we’re speeding up the alerting and the shuffling of the deck, hopefully speeding up that process. Whether that has any ramifications for what can be delivered surely must be separate.*

Patient centeredness is required to optimize the consultation. Because GPs will have an agenda to complete the referral and avoid the pitfalls of missing out information, it may hamper eye contact with the patient.

Participant 5:  
*...you’ve been trying to talk to a patient as you do, not talking to your screen.*
This argument was countered as rectifiable with communication.

Participant 6: *They go, “Oh no, let’s get it done.” They want to. They want to get it done.* [omitted] *They’ll cooperate. I think that communicating your process is the only way to get through.*

Autonomy is a patients’ right, and some interviewees were concerned about BNP effect on that. Patients may be coerced to do tests at a timeline as it suits the GP, to be able to do the referral. This may not suit the patient.

Participant 8: *I get the nurses to ring and say, “Can you get them to do it because I can’t refer.”*

The potential barrier to patient autonomy can be countered by informing patients appropriately.

Participant 2: *It’s a very shared or negotiated treatment plan. I’m always sort of pushing it back onto the patient to make sure that they’re okay with it every step of the way.*

There are standard questions that need to be asked and ticked off on the eReferral. The contentious issue raised, was if some questions may create unnecessary patient anxiety.

Patients who are not based in one area may have difficulty to access services.

Participant 13: *Basically, an alternate lifestyle, because he was this truckie. He had a base here, but he was barely here.*

Such patients are unlikely to be served well with any treatment model. An altered patient mindset, taking responsibility for their own health, and returning to seek help are possible solutions to this problem.

Participant 8: *Follow up, yeah. I think now they pretty much all are on track, but not always.*

Patients can utilize the Bay Navigator website to obtain health information, or to review referral pathways, as it is an open access website. Interviewees were not convinced that this would be used.

Participant 15: *I don’t know if they know about it.*

Participant 9: *You can give the website to the patient, but the families with the skin sepsis in this practice don’t necessarily have computer access.*

Presumptions should not prevent the use of technology.
Participant 2: ...but with sort of the middle age group to the younger age group, it’s just an extension of their world now, I find. Using computer based support tools to support our decision making because quite often they’ve already been on and googled what’s going on, what they think is going on.

The cost to the patient and the impact of the BNP thereof, was a concern to some interviewees.

Participant 14: You need to do certain things before we send the referral through. And I may need to see them again depending on what was missed.

Patients’ views on health rationing were debated and conflicting views among participants were evident.

Participant 7: It is a way of rationing the health budget and that there is only so much money in New Zealand, especially for hip knee pathway. People understand that.

Participant 5: Sometimes patients say I paid my taxes, I want to be referred.

Participant 1: Ethical rationing is only going to be achieved by the doctors and the nurses and the allied health people and the patients all saying this is how we will do it, this is what we want, this is what we need.

According to some participants, collaboration between all role players will be necessary to achieve health outcomes that will be acceptable to all New Zealanders. The input and participation of patients cannot be underestimated in achieving this goal.

Participant 1: ...if it’s good for my mother aged ninety with various health problems, it’s good to be likely for somebody else’s mother...

5.1.4 Persuasion to use of BNP: barriers and facilitating factors related to secondary care

During interviews with GPs, factors were mentioned that would influence their attitude towards the BNP, due to primary secondary interface.

Participant 10: It gets people sitting in the same room talking about how to do things better for the patients. Which is that’s why we’re all here isn’t it?

There is enormous pressure on service delivery on the hospital system. This pressure comes from Government but also from consumers. Secondary services rely on primary health care...
systems to do appropriate, complete and timely referrals which will enable them to prioritize and address the growing need for service. Participants acknowledged this.

Participant 11:  *Certainly it’s a good service. If that’s what they’ve need to do to limit the referrals or standardize the referrals, and then prioritize them as we’ve been looking for. I guess that’s very helpful.*

Good relationships between primary and secondary clinicians are paramount. Goodwill is not well served by suspicion between GPs and secondary providers. Some participants experienced mistrust.

Participant 7:  *It’s normally ENT who often send the referrals back and that’s just because they are awkward.*

Participant 5:  *If a specialist has reviewed my letter, I would like that specialist to sign it. I would also like the grading that they’ve sent back to be legibly signed by somebody.*

Participant 6:  *We didn’t seem to have any autonomy about deciding to make that go on. It’s just its DHB decide. I think that the secondary care people probably had a lot of influence on the decisions.*

The dubious confidence in commitment from the team members flowed over into suspicion about rationing. However, interviewees did seem to understand the need for rationing and the intent from secondary to be fair.

Participant 15:  *I don’t know if always the right decisions are made about what is rationed and what’s not. I don’t know if they’ve got it quite right yet. But, is has to be done somewhere.*

Participant 1:  *...that’s this peak of funding that’s going into secondary services will need to spread out on both sides to the community services.*

Some interviewees described reluctance from secondary to accept acute patients, which was resolved using BNP. However some interviewees felt that specialists were not consistently informed about the pathway recommendations and this could hamper persuasion to use the BNP.

Participant 11:  *So I’m ringing my friendly radiologist [omitted] doesn’t seem to having any idea for what the requirements were.*

Participant 12:  *...he was a little bit reluctant to take her, although he equally couldn’t say, with any confidence, no, no, just refer to...*

Consultants have to make decisions and referrals are the communication portal between primary and secondary. Using the BNP in order to get the message accurately across from primary to secondary care drew many remarks for interviewees. Interviewees felt that the
processes of referrals could be better. The fact that formatted eReferrals cannot be sent without completing all the boxes, is an annoyance to some as well, as laboratory results are available to all sectors through Éclair. The standard of referrals is acknowledged to be variable by participants. Participants appreciated that the secondary services had a heavy workload, but most participants were concerned about the care of the patient in the waiting time. Most participants found it an addition to their workload.

Participant 13:  It’s got to save hassles at the other end. It’s got making it easier for the triage team at the other end reading the letters to have all the information there in front of them.

Participant 8:  ...we all thought, that when we did our referrals that they would stay electronic but apparently what happens is they get printed out at the other end and then taken manually to somewhere else, so I didn’t feel in doing it that way there was a big advantage in doing it...

Participant 5:  You’re thinking it would be nice if I could just send that referral today because there’s enough there to say they’re going to need a colonoscopy. Sure the ferritin and the haemoglobin, they’ll see that. It’s going to be on Éclair when they get to the outpatients.

Participant 9:  ...then you’re left with that in your tasks and your recalls to be chasing through actually have you heard anything yet...

General practitioners are interested in their patients’ health journey. Going into hospital, may fragment this care if the GP is not involved in their care or kept in the loop. Interest was expressed in having communication paths available enabling GPs to access hospital notes. Although CHIP does fulfil some of the expectations, being able to read the treating specialist’s progress notes on the patient was a suggestion made by one participant. It was acknowledged that this should not become another chore for the hospital doctors.

Participant 8:  I mean, it’s busy enough for them. Somehow if you could access to what the hospital doctors are writing if you wanted to. You don’t want the doctor in there to have to, I mean, it’s an ongoing thing. You don’t want one more hoops for them to jump through.

5.2 Conclusion

Continuing to work with multidisciplinary team strengths and overcome weaknesses are important factors that can enhance the buy-in of all role players into the Bay Navigator Pathways. Mixed attitudes were discussed in relation to persuasion to use the BNP. Although these barriers and facilitators were through the eyes of the GP, the decision to use were also
discussed in relation to the greater good of the patient, and improved healthcare continuity with hospital services.

In the next chapter, discussion will be on the next step in the diffusion of innovation process, namely implementation. Once interviewees had the knowledge of the Bay Navigator Pathways (chapter 4), debated the choice of pros and cons to using the Bay Navigator Pathways (chapter 5), the next step will be to actually practically implement the Bay Navigator Pathways (chapter 6).
Chapter 6 – Results: Theme 3 – Implementation & Theme 4 – Sustainability and Confirmation

THEME 3 - IMPLEMENTATION

Factors that can affect the acceptance of the Bay Navigator Pathways were discussed in the previous chapter. General practitioners that were introduced to the BNP, and were satisfied that the BNP is a worthwhile innovation, would probably “give it a go”. Acceptance will trigger implementation.

In this chapter implementation of Bay Navigator Pathways into general practice will be discussed. Overall, the use of the BNP is difficult to quantify, as most of the measures to do so are indirect. First the self-assessed impression of interviewees on their frequency of use of BNP will be discussed. Reinvention ideas and implemented reinvention ideas will be considered as part of the implementation process. The last step in the Diffusion of Innovation process is sustainability and confirmability, discussion of those will conclude the discussion of results obtained from research data.

6.1 Implementation of BNP in everyday practice

6.1.1 Frequency of use of Bay Navigator Pathways

Interviews were held between April 2015 and September 2015. The Bay Navigator Pathways were already in use in general practice for approximately four years, and interview prompts included a direct question about the frequency of use of BNP. Eight interviewees estimated their use of the BNP. The other interviewees did not feel comfortable estimating their use.
The 3D chart indicate the estimations of BNP use of nine interviewees, because one interviewee separated the use of the Pathways (1x/week) and the use of the Website (2-3x per week). Overall use is low, with two to three times per week as the highest number mentioned towards use of Bay Navigator initiatives. Interviewees also indicated that they use specific components of the Bay Navigator initiatives.

Participant 8:  *I mainly use it for accessing Eclair.*

Participant 1:  *...I don’t actually look at the pathways particularly, it’s the referral process that really drives it for me.*

Participant 2:  *Most times, it’s just a reference tool.*

Figure 6.1: Frequency of use of BNP
Six of the interviewees did not quantify their use of the BNP, but their responses indicated the trend to be similar to those who did give an estimate of their use.

- Participant 5: *It probably isn’t that often.*
- Participant 1: *Every now and again...*
- Participant 9: *...not very often.*

Some interviewees indicated that they initially used the BNP more frequently than they did at the time of the interview. The reason most frequently given was that they used the Bay Navigator Pathways more early in their career, but as their confidence in patient management increased, they used it less.

Interviewees justified their use of BNP by arguing that because of their gained knowledge of the prerequisites of the Bay Navigator Pathways, the need to refer to the actual pathways diminishes. System updates to include eReferrals that incorporate the Bay Navigator Pathways, also made the use of the Bay Navigator Pathways subconscious. Variety in patient load and patient demographics may also influence the Bay Navigator Pathways which general practitioners may have to use less, or more frequent.

- Participant 15: *I think it’s quite variable. You do tend to get things in runs.*
Participant 4: *Do I access them every week? No, because I don’t think you have to. If you’re using the same referral for chronic care, you soon learn what is required.*

Participant 11: *...so looked under it the first few times and it’s actually embedded in our system so I find it easier than having to go under another system to do that.*

One interviewee did indicate that the use of Bay Navigator Pathways was requested by external role players. This may be a in the form of a returned referral from secondary services, requesting the requirements to be updated according to the Bay Navigator Pathways.

Participant 6: *Recently, I’m finding I’m getting told to [omitted] I got referred back to that uncomplicated dementia pathway.*

The Bay Navigator Pathways was used sporadically by all interviewees, and seemingly sometimes under duress. Interviewees chose to single out some components of the Bay Navigator website which they found helpful, implementing these in their daily practice.

During the implementation of the Bay Navigator Pathways in daily practice, interviewees were faced with obstacles in the use and application of the Pathways. Such difficulties may lead to failure to implement, but it may also lead to enhancement of the Pathways through reinvention. In the next section reinvention initiatives will be discussed.

### 6.1.2 Reinvention ideas

Interviewees highlighted some difficulties that they came across in using the Bay Navigator Pathways. In some cases, the difficulties they encountered dominated the interviews. Some interviewees already employed some innovative ways to overcome some of the difficulties they encountered. Other interviewees offered ideas on how to improve the pathways when a prompt regarding suggestion for change was put to them.

Most of the participants’ suggestions for improvement were about improving the pathway delivery, access and format. They often acknowledged that the system will evolve and become more user friendly with time. Perseverance and persistence with the growing pains, while continuing to use the Bay Navigator Pathways, was mentioned.

Participant 14: *And it will constantly change, and hopefully eventually get more easier...*
One idea was to create an icon, which leads directly to the Pathway part of the website, was expressed. It was even taken a step further and suggested that GPs could personalize shortcuts for quick access to their most frequently used pathways.

Participant 13: *The only thing that I would have to make it even easier is a Bay Nav link, you know, along the icons on MedTech.*

Participant 11: *That would save a few clicks and probably help me to remember that there is a pathway there.*

Participant 12: *It’d be nice if you could personalize it so that you have things that you use most often in an easily accessible...*

Having all pathways integrated into the electronic referral system, would ease access and enhance use of the BNP.

Participant 7: *I think that they probably will get integrated within a lot of the MedTech and the eReferrals. Especially for the cardiology referrals, it will be very useful if they were integrated through.*

Participant 11: *I guess the most useful thing would be integration with that program.*

Another suggestion was to have the laboratory tests required by a specific Bay Navigator Pathways already pre-formatted on a blood request form. When required, only one tick would be necessary to print the blood request form.

Participant 2: *If it says they need these bloods, you can actually tick that and it auto populates it, prints the blood form out already and puts it into the PMS, that’d be great.*

Making the pathways much shorter, with much less steps was another suggestion to improve acceptance and use. It is time consuming and impractical for the GP to have to work through laborious steps of management. The shortest possible version should be employed.

Participant 5: *...you have to go through all those steps. There may be too many steps.*

Another improvement that one interviewee would find useful was to have printable information sources for patients. Such printable resources should not be too long, so as not to cost too much to print nor to dishearten the patient that does not want to read a novel. It should rather be a concise, accurate summary of the question at hand that will improve patient insight and cooperation in managing of the named condition.

Participant 9: *What I want is a nice A4 that I can print out.*
There were also ideas to improve utilisation of BNP by enhancing the primary secondary interface function of the BNP.

Participant 15: So, as a GP you would like to have a little bit more say about a grading system from you knowing the patient and having all that background information.

Participant 4: It would be nice to hear what the specialists think of our referrals and the quality of the referral they’ve receiving from general practice as to what they feel it’s good on average and has their workload decreased as a result?

Interviewees offered suggestions on how to improve GP knowledge and motivation to use BNP.

Participant 7: I think it would be nice, very nice if the clinical school and the PHO, probably once a month, did focus on one or two Bay Navigator Pathways and do a bit of teaching...

Participant 9: ...Bay Navigator could market and say don’t forget you could claim this towards your MOPS points. I think that would allow people to do them themselves and learn how to navigate their way around the pathways...

Participant 7: ... have the talk actually videoed and you could download it from the PHO as a podcast, and that would be really, really useful.

One participant suggested promoting Bay Navigator as an information site where guidelines can be accessed for scenarios that may not happen frequently in general practice.

Participant 6: ...incidentalomas are a problem, we need to have protocols as to how often they’re followed up. I thought Bay Navigator would be a great place...

Reflecting on the narratives of the interviewees, is was obvious that participants had thought deeply about their experiences in trialling and implementing the Bay Navigator Pathways. Some participants mentioned barriers that discouraged further use of the Bay Navigator Pathways, while other interviewees came up with innovative ideas of how to integrate the BNP within their everyday practice.
THEME 4 – SUSTAINABILITY AND CONFIRMATION

6.2 Sustainability and confirmation of Bay Navigator Pathways

Interviewees were prompted to talk about their views on the patient journey, and whether the implementation of BNP in the process affected the integration of primary and secondary care. I was curious as to whether a huge improvement in patient outcomes might impact positively on their continued use of the BNP. The interviewees also discussed their views on the future of the Bay Navigator Pathways. To probe possible generalization of the pathway concept, interviewees were asked if they think that Bay Navigator Pathways may be suitable for use in other DHBs.

6.2.1 Integration of health care

Ideally the health journey for the patient should be smooth, and there should be no “our domain” and “their domain” split between primary and secondary. Some participants expressed scepticism about having so many GPs, practices and other primary health care providers united to deliver information to secondary in an appropriate, complete way. Bay Navigator Pathways aspire to achieve this. Then the information should be processed in a quick, uniform way to give the patient the correct grading for their condition. Again, Bay Navigator Pathways should simplify this aspect. The anticipated treatment should be delivered within the timeframe, and feedback given to the treating GP in a timely manner. In spite of these aims, many participants were unsure if there is any benefit in following the BNP as part of their patients’ health journey.

Participant 4: *Minimal. Minimal. I still don’t think secondary care have that good a grasp on what we do out here in the community.*

Participant 1: *Not necessarily. The classical thing would be if I try and follow a pathway and my patient gets yes, we will see you within five months, either in Tauranga or Whakatane, I don’t think they feel particularly empowered by that sort of response.*

Participant 10: *There’s that interface, actually, often doesn’t work.*

As previously noted, positive points of the BNP mentioned by participants were that it standardize treatment and act as a backup for GPs.

Participant 12: *I haven’t noticed any difference. I think it’s a good kind of backup I suppose.*
Participant 11: *I guess it standardizes it. Not sure if it integrates it.*

Even the grading of referrals was regarded as suspicious by interviewees.

Participant 14: *Sometimes you wonder. Like when they got those pathways, if they’re not being fulfilled to the T. Although you may have all the relevant information. But it goes to the referral centre, not the specialist, I’m not sure who assesses it, but sometimes they can be quite sticky with everything being ticked...*

Although outside the scope of the BNP, the responsibility of managing the patient and avoid slip-ups (where treatment modalities were not done as anticipated), remained high on the list of concerns.

Participant 10: *I feel I’m part of the time wiping the hospital’s bottom all the time checking the things that are being done. Checking that what they say they’re going to do, they’re actually going to do.*

Participant 11: *I guess as long as the hospital defines, this is what you need to do, this is the bar you have to jump over. Once you’ve done this as long as they still fund it, then it happens. For me I think that’s fine. I’ll have to live with it because at least it gives us and the patient certainty as well.*

As shown in the preceding paragraphs, BNP seemed to fail the GPs’ trust as referral modality.

The specialists and on call registrars play a pivotal role in the communication process. The positive experiences that GPs had during the BNP process, may improve sustainability of the BNP.

Participant 15: *I think having specialists, consultants working with GPs is really useful.*

Participant 7: *I think it was [omitted] came to talk about the orthopaedic pathway. You actually felt he was interested in general practice and the needs of the general practice patients. It was quite nice to have that contact, especially with an orthopaedic consultant.*

In as far BNP is a way of ethical rationing, interviewees reflected concerns of how to meet increasing patient needs effectively and efficiently.

Participant 1: *If we do this right, and our GP colleagues at the coal face refer to us with the right information, our job will be so much easier and the patients experience will be so much better and the people who need it will get it earlier etc etc, so there is the need, the limited resources of whatever this business is it’s called ethical rationing.*
Having the BNP integrated into systems was mentioned, with apprehension about the extent of this process in view of experiences in the UK.

Participant 7:  ...their good clinical care for chronic conditions was protocol led but it was integrated so you didn’t realize you were doing it. I think there would be a place for that in New Zealand as long as it doesn’t go too far as QOF.

Concerns were expressed by interviewees about the effect on themselves with primary care being central in healthcare delivery.

Participant 2:  ...my job’s not one to manage everything for my patient. You’re going to drive yourself mad; you’re going to do that. My job’s just getting them in touch with the person they need to be in touch with quickly.

Patients should benefit from the process of pathways to make it sustainable.

Participant 4:  That’s the main reason for referral and if it can be streamlined through Bay Navigator or whatever system is out there, it is for the patient benefit first and foremost...

Participant 15:  I don’t know if it’s improved waiting times or if it’s resulted in a better service. I wouldn’t know that for the patient.

Participant 4:  We’re trying to do quite a bit to ease patient care, improve patient care, ease the transition from general practice into the secondary services.

An unexpected theme that arose from the data is the influence of CHIP on improved communication between primary and secondary care, and the gap that it filled. Being a Bay Navigator initiative, not part of the BNP, it is worth exploring more in future.

Participant 13:  I could jump on. It saved the nurses five minutes making a phone call. I had it within 30 seconds. That’s great. That’s really good.

Participant 5:  I haven’t found CHIP necessarily always to have a lot of information within it. [omitted] Again, that’s pretty helpful, particularly if you’re dealing with a casual patient.

Participant 10:  When the patient has been seen, often there’s considerable delay before I get information. [omitted] ...although that new portal is brilliant, slightly off topic. The CHIP portal.

6.2.2 The future of the Bay Navigator Pathways

In response to a prompt testing if interviewees saw a future for the Bay Navigator Pathways, eight interviewees were affirmative. Some did not comment. Two were more reserved with their responses.
Participant 10: *I haven’t a clue. I think, well, let’s...maybe if I have a crystal ball, I would imagine that... I think that will expand...[omitted] I’m reasonably sure that more and more conditions will become accessible to pathways.*

Participant 5: *I don’t think it’s a bad thing. I’m sure it’s here to stay in some form or another. It is a matter of trying to improve it, isn’t it? Get the best out of it.*

The nuance that the BNP cannot be a static thing, but need to be audited and changed as medical knowledge and systems change, was an expectation from the interviewees.

Participant 14: *It’s evolving, if you look at how it was in the beginning to how it is now, it has evolved. And it will constantly change, and hopefully eventually get more easier.*

Participant 1: *The Bay Navigator is an integral information system and the Bay of Plenty District Health Board system has to be appropriately funded so that pathways are reviewed and ticked again or changed as they need to be, and referral systems changed as they need to be based on our ongoing knowledge.*

6.2.3 National pathways

Interviewees were prompted about their ideas about whether the Bay Navigator Pathways, in one form or another, can be utilized in the wider New Zealand context as well.

Participant 15: *I don’t see why not. It would just need to be updated with local referral procedures and wait times and that stuff.*

Participant 13: *Surely, it would make more sense to have one that’s New Zealand based, and change the little bits and pieces.*

Participant 4: *Yeah, I mean I think if that was to happen, you would want to set it standardized across all of New Zealand so that we’re all working off the same hymn sheet.*

The idea that there should be a process of negotiation to eliminate weaknesses in different pathway programmes to come up with a national pathway was mentioned. Many interviewees felt that the duplication of each area doing their own pathway development was unnecessary and that collaboration and coordination could be employed to avoid wasting resources.

Participant 5: *Undoubtedly there’s an opportunity for a meeting between the areas to pool their ideas about what’s worked well for them, what hasn’t worked well, and how they got around this, that and the other, rather than everybody inventing their own wheel separately.*
Participant 11: *It does worry me that every hospital has to reinvent the wheel and redo the same things. That seems like an incredible waste of resources really. Just criminal really. To have to do it all over again somewhere else. Coming up with their own ideas that are not unique.*

However the contrasting notion was expressed that each area has a distinct population demographic with distinct needs and the rationale for local pathways that were not “one size fits all”.

Participant 3: *I don’t know, because in different places in terms of population, different populations are different, and also the number of specialists, you know, radiologist could be different. So generalizing that for the whole country may not be really, you know? So we have to focus on what’s going on in Tauranga.*

Participant 10: *Health care is, in my opinion, stupidly fragmented in this country. You’d find that whatever, or even though they’re based on best practice, the actual individual nuts and bolts of the pathway will probably... you’d find wouldn’t work in Northland or in Timaru or somewhere like that.*

One compromise was to have regional, rather than national or local pathways.

The findings presented in the preceding three chapters illustrates participants’ knowledge about the BNP, the persuasion process that lead to implementation and ideas on how sustainable the BNP were. Many conflicting views were expressed. However, the interviewees had the best care for their patients in mind, and strived to include patients of all cultures into their decision making processes for improved health outcomes for all New Zealanders.

Participant 1: *And so in terms of the road ahead and what is good for New Zealand and developing ability within the hapu and iwi and a hub to do their own thing, to develop a lot of these things at a community level, we see that as a great opportunity.*

The next and final chapter synthesises the findings of the present research with the literature reviewed in Chapter Two and makes recommendations concerning the implementation of BNP among WBOP GPs.
Chapter 7 – Discussion

7.1 An investigation into the barriers and facilitators of acceptance, and use of Bay Navigator Pathways (BNP) by general Practitioners in the Western Bay of Plenty.

This chapter begins by tabularising context-unique barriers and facilitators, as identified during the research project. Aspects of the barriers and facilitators will be considered in relation to other studies.

The success or failure of implementing change are variable, influenced by multiple and unpredictable interactions arising in different contexts and settings, according to Greenhalgh. Therefore, this chapter will continue by further examining the context in which the research project took place. Aspects of influence on the setting relating to this research project included the culture of care, BNP grounding emphasis, the expected delivery of quality care and the clinical leadership.

Strengths and weaknesses of the study will follow. Once all these factors are understood, the meaning of the study as to how the knowledge of this research study can inform better utilization of the quality improvement initiative, the BNP, for clinicians and policymakers. Some suggestions for future research will conclude this chapter.

7.2 Statement of principle findings

Discussion of the factors that could affect the acceptance and use of the BNP are according to the Diffusion of Innovation framework, used in this research study. There are factors that made GPs cautious about engaging with the BNP. Similarly, there were practical implementation barriers. Although there is a nuance difference, these were grouped together as barriers. All factors, modifiable and non-modifiable are named. Facilitating factors enjoy similar attention in the research findings. The incentives and encouraging attributes highlighted by the research is important in paving the way for future improvements of the Bay Navigator initiative.
7.2.1 Development of the Bay Navigator Pathways

The development of the BNP by multidisciplinary teams, giving consideration for all the role players at stake, was infrequently appreciated by participants. There was appreciation for BNP being a local initiative. Knowledge about the BNP was found to be an entity of two halves: one half being ways of obtaining the initial knowledge, but added onto that the second half of putting the knowledge into practice. The one without the other would not complete the commitment for GPs in acceptance and use of the BNP. One participant mentioned how reassuring it is that local specialists underwrite the BNP: such an attitude can be a facilitator, but GPs should always be aware of their responsibility to check the evidence behind BNP and discuss concerns with the development team, rather than just sheepishly following instructions.

7.2.1.1 Acquiring knowledge about the Bay Navigator Pathways

Interestingly, self-directed learning and incidental browsing of BNP were commonly mentioned as an education tool. The requirement that vocationally and generally registered GPs should continue to do Continuous Medical Education (CME), a portion of which may be self-directed learning, enhanced self-study of the BNP. This method of obtaining knowledge was not anticipated, nor found in literature. Self-directed in-depth browsing and familiarizing with the different pathways seemed to be a novel way of self-study by GPs in the research cohort. However, reading through the Pathways just to claim Maintenance of Professional Standard (MOPS) points, is not the ideal. As Zwier comment regarding doing surveys just as a token to get MOPS points: “The main purpose of implementing patient surveys is not about the 10 MOPS credits. Instead, the real reason for doing patient surveys is that they allow us to identify shortcomings in service delivery and where necessary, to make changes to current practice.” Similarly, reading BNP should lead to implementation of the gained knowledge towards improved practice.

In the interviewed cohort, electronic distribution of information about Bay Navigator Pathways and education meetings were the favored methods of acquisition of knowledge. Each of these was mentioned with a set of barriers and facilitators. Electronic mail was frequently left unopened and unread. With the information overload coming through electronically, the risk of deleting more and more valuable sources was mentioned. On the contrary, having information in the inbox allowed interviewees to read it later, or file it accordingly to be opened later when applicable. Email reminders were mentioned as
something that would refresh the memory in a short but effective way about new Pathways developed. Making education meetings fit into the GP’s world proved to be a challenge. Specific barriers mentioned by interviewees include inconvenient venue, impossibility to find time in busy schedule, clashing commitments and the boring content of the meetings. It was also mentioned that sessions should be repeated to enhance opportunity for attendance. Meetings were called “lectures” by one interviewee, and may indicate a hierarchy which can negatively impact on the primary-secondary relationship. An educator format like podcasted talks would allow GPs to download and listen to presentations at a time that would suit them. A positive factor mentioned by two interviewees are that practice teams coordinate attendance to these meetings, consequently resulting in feedback and discussion within the practice setting. Regarding knowledge and implementation of knowledge, “osmosis” of knowledge through different team members was mentioned as an enabling factor.

<table>
<thead>
<tr>
<th>Table 7.1: Barriers and facilitators identified regarding acquiring knowledge about the BNP</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Acquiring knowledge: KNOWLEDGE OF BNP</strong></td>
</tr>
<tr>
<td><strong>Barriers</strong></td>
</tr>
<tr>
<td>Unmotivated to self browse</td>
</tr>
<tr>
<td>Time to self browse</td>
</tr>
<tr>
<td>Electronic dissemination of knowledge:</td>
</tr>
<tr>
<td>Unread electronic mail, information overload</td>
</tr>
<tr>
<td>Meetings: boring, inconvenient venue &amp; time,</td>
</tr>
<tr>
<td>needs repeated sessions, podcasts unavailability</td>
</tr>
<tr>
<td>Practice info sessions: difficulty to</td>
</tr>
<tr>
<td>practically achieve this</td>
</tr>
<tr>
<td><strong>Facilitators</strong></td>
</tr>
<tr>
<td>Self directed learning: MOPS points</td>
</tr>
<tr>
<td>Email reminders/prompts facilitate use later</td>
</tr>
<tr>
<td>Teamwork towards attending education meetings</td>
</tr>
<tr>
<td>Opinion leaders, including specialists or GPs, are pivotal in using Bay Navigator Pathways</td>
</tr>
<tr>
<td>Osmosis of knowledge within practices</td>
</tr>
</tbody>
</table>

7.2.1.2 *Actioning knowledge about the Bay Navigator Pathways*

Although one interviewee felt coerced to use the BNP, the use of BNP is not a prerequisite for practicing in the WBOP. The participants weighed up the relevant advantages of acceptance and use of the new innovation (or parts thereof), compared to continuing in their old ways. Grol\textsuperscript{50} described centrality, where a new innovation becomes part of the daily routine, as a factor that can promote use of new innovation. As BNP is not essentials in
the referral or management of patients, it may harvest negative attitude towards the Pathways, as it may be seen as something to only use when you are unsure. Although most participants are using BNP to some extent, it is not centralised in any of their daily consultation patterns. Although the Pathway integrated eReferrals were highly recommended, it is not compulsory either.

The initial reason for the discrepancy between what some GPs think and what practically happen, were the initial technical difficulties of the practice software to incorporate the electronic referral successfully. Even at the time of the interviews there were still no solutions to all the technical issues. Some GPs who initially trialled and failed were not followed up to motivate retrial. Technical help and support were not consistently delivered. Acceptance and use of the BNP may have been enhanced if they were compatible with existing systems from the onset. Participants describe a certain acceptance to initial failures, expressing the need to improve the BNP and make it more user-friendly. The period where users would accept the growing pains associated with trialability of the BNP may be getting close to its end.

Another important aspect that came to the fore in this research study is the importance of having collegial leadership within each practice – for both knowledge and also practical demonstration of the use of the Pathways. Results only mentioned examples of GP colleagues fulfilling this role, but this role might be fulfilled by any member of staff – especially if it was purely technical support that was required.

Table 7.2: Barriers and facilitators identified regarding actioning knowledge about the BNP

<table>
<thead>
<tr>
<th></th>
<th>Barriers</th>
<th>Facilitators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actioned knowledge:</td>
<td>USE OF BNP</td>
<td></td>
</tr>
<tr>
<td>Barriers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unmet or unrealistic</td>
<td>Practice support to demonstrate use</td>
<td></td>
</tr>
<tr>
<td>No help or assistance</td>
<td>Bay Nav link or shortcut on desktop</td>
<td></td>
</tr>
<tr>
<td>Difficulties with</td>
<td>Still in period of trialability (debatable)</td>
<td></td>
</tr>
<tr>
<td>Low centrality of</td>
<td>Integrated pathways in eReferral</td>
<td></td>
</tr>
<tr>
<td>Osmosis of Knowledge</td>
<td>within practices</td>
<td></td>
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<tr>
<td></td>
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</tbody>
</table>
7.2.2 Barriers and facilitators regarding aspects of the innovation

There was overlap regarding barriers and facilitators between the issues GPs faced regarding actioning their newly acquired knowledge, and the barriers and facilitators mentioned in regards to aspects of the innovation (BNP). The initial enthusiasm described by Dr. John Gemming after the initial meeting for the formation of the Bay Of Plenty Initiative (mentioned in Chapter 1), could not gain momentum, and the enthusiasm could not be maintained. Aspirations to create a perfect innovation, was far fetched, and goals that were set proved to be impossible. However, there were many positive attributes and positive lessons learned from the Bay Navigator-innovation.

The emphasis of discussion will now be on the characteristics of the Bay Navigator Pathways and ways in which the Bay Navigator Pathways are delivered. Barriers and facilitator discussion will be divided between aspects of the innovation, namely a general overview, the Bay Navigator website, eReferrals and technology.

7.2.2.1 Generally mentioned barriers and facilitators (See Table 3)

BNP rely on the clinical judgement of GPs to identify and treat patients who are outliers or borderline cases. Some interviewees were sceptical about the ability of BNP to accurately portray the patient’s clinical picture to the hospital, as they felt that the required baseline information was delaying timely referral. The BNP forms a platform for shared decision making between the GP and patient, and allows the patient and their whanau to be fully informed about the process. Participants thought GPs were empowered by this process, as some patients may have unrealistic expectations of specialist intervention without clinical grounds. BNP should be a user-friendly tool, which once incorporated into routine practice, would contribute to efficient doctoring. This notion was also described by Grilli55, in that pathways “can improve providers’ performance by itself.” Most participants mentioned the positive impact that the BNP can have for GPs new to the area and GP registrars to familiarize themselves with the local requirements.

Three interviewees mentioned the confusion between the two Pathway programmes that were advocated by the WBOP PHO – the Map of Medicine (more Waikato based), and the Bay Navigator Pathways. One interviewee favoured using the Map of Medicine pathway, but also used the Bay Navigator Pathways. Most interviewees only mentioned the BNP as their local pathway programme of choice.
Complexity of the Bay Navigator Pathways again drew opposite views from interviewees. Interviewees discussed several aspects related to Bay Navigator Pathways that may complicate or simplify the use of the Bay Navigator Pathways. These will be discussed in the next three sections of practical aspects of the Bay Navigator Pathways.

**Table 7.3: Barriers and facilitators identified regarding BNP per se**

<table>
<thead>
<tr>
<th>Pathways</th>
<th>Barriers</th>
<th>Facilitators</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Confused between Map Of Medicine and BNP</td>
<td>BNP use can save time or telephone call to clarify</td>
</tr>
<tr>
<td></td>
<td>Difficulty to find specific pathway</td>
<td>BNP can inform new and trainee GPs</td>
</tr>
<tr>
<td></td>
<td>Scepticism about the pathways</td>
<td>BNP lead to efficient patient management through information, prompts to do correct tests &amp; reminders</td>
</tr>
<tr>
<td></td>
<td>Difficulty to fulfil requirements of BNP</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Can cause delayed referral</td>
<td>Empower GP to negotiate appropriate care</td>
</tr>
<tr>
<td></td>
<td>Difficult to portray patient’s clinical picture</td>
<td></td>
</tr>
</tbody>
</table>

### 7.2.2.2 Bay Navigator Website

The initial website design and function were scrutinized for being “childish”, with a poor search engine and navigational difficulties. All but one interviewee felt that the new Bay Navigator Website was an improvement on the previous version, although it was mentioned that it was becoming too big and had illogical placing of certain topics. Interviewees mentioned the need for a site design that allowed quick search and a short version pathway with A4 printable patient information. Speed of internet access was not the same across all the areas in which the interviewees worked. This, together with the mentioned expense of updated computers and software, could contribute to practice owners’ low emphasis on the Bay Navigator Pathways. Two interviewees (one practice owner and one employee) mentioned that Bay Navigator Pathways were not promoted by practice owners.
Table 7.4: Barriers and facilitators identified regarding Bay Navigator Website

<table>
<thead>
<tr>
<th>WEBSITE</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Search function on the BNP deemed not good</td>
<td>Centralized information</td>
</tr>
<tr>
<td>Difficult to learn if no help or assistance</td>
<td>Resources at your fingertips</td>
</tr>
<tr>
<td>Old vs new website discrepancy in interviewee comments</td>
<td>Old vs new website discrepancy in interviewee comments</td>
</tr>
<tr>
<td>Technical failures</td>
<td></td>
</tr>
</tbody>
</table>

7.2.2.3  eReferrals

There were both positive and negative comments about the tick box format. Negatives included missed information for which they had to contact patient again, inability to make the patient “fit” into the boxes, need to elaborate on some aspects and having to wait for blood results etc to be able to complete the required boxes, with consequential fear of forgetting. Related to the delayed eReferral, interviewees mentioned that they were unable to park and retrieve the eReferrals, leading to doubling of work. Facilitators identified included the speed in which the tick box referral can be done, with greater success of being accepted. Interviewees appreciated that the Pathway was integrated in a daily-use format, which once completed a few times, facilitated easy recall of the required information and necessities to complete the tick box referral without hiccups.

Table 7.5: Barriers and facilitators regarding Bay Navigator integrated eReferrals

<table>
<thead>
<tr>
<th>eREFERRALS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Barriers</td>
<td>Facilitators</td>
</tr>
<tr>
<td>Tick box format: difficult to explain clinical pattern &amp; can be time consuming</td>
<td>Integrated pathway into eReferrals is helpful</td>
</tr>
<tr>
<td>Cannot park and complete later</td>
<td>Contain all relevant information necessary for referral</td>
</tr>
<tr>
<td></td>
<td>Increased referral success</td>
</tr>
<tr>
<td></td>
<td>Speed of referral</td>
</tr>
<tr>
<td></td>
<td>Once done a few times, know which questions to ask</td>
</tr>
</tbody>
</table>
7.2.2.4 Technology

This terrain overlaps with the discussed section on “Actioning of knowledge”. However, this was a frequently mentioned obstacle for all the interviewees. The interview schedule did not include a Linkert type scale of computer confidence of interviewees. McGeogh did include this in his 2015 Canterbury based research, and found that 93% of GPs felt that they had better than basic computer literacy and were confident computer users. Some interviewees did mention that the Bay Navigator Pathways website and eReferral information contained clear instructions to make use and navigation easy. The reality that there were three different Patient Management Systems in use within the WBOP PHO complicate an easy, one-instruction-for-all approach when advocating the use of the Bay Navigator Initiatives.

Table 7.6: Barriers and facilitators identified regarding technology

<table>
<thead>
<tr>
<th>TECHNOLOGY</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Barriers</strong></td>
<td><strong>Facilitators</strong></td>
</tr>
<tr>
<td>Internet speed variation slow down users</td>
<td>Clear instructions to use make use and navigation easy</td>
</tr>
<tr>
<td>Different PMS used in different practices in WBOP PHO</td>
<td></td>
</tr>
</tbody>
</table>

7.2.3 Barriers and facilitators identified towards the self of the GP

Aspects of the BNP were interpreted by GPs in the light of their own practice milieu, personality and preparedness to change. Interviewees described various emotions regarding the use of the BNP. Personality might have played a role in how GPs perceived the BNP. Personality types were not within the scope of this research although it is tempting to suggest that the feelings elicited by the Pathway may affect the way the Pathway was perceived. There may be a “tipping point” which may be situated in the GP’s personality that results in which direction the innovation is actioned or abandoned. I assume that personality will be one component of an overall decision-package that motivated GPs to be more adventurous in trialling new innovations.

For GPs to use the BNP, they must balance the consequences of implementing the Bay Navigator Pathways and the effect it will have on their daily activities, against continuing to practice in the current way. Factors affecting the relative advantage of use of the BNP were
the possible effects on the GP’s practice adequacy: whether the GP might get better patient outcomes with similar (or less) effort and time efficiency. The research design included only GP interviewees, and therefore the barriers and facilitators mentioned, are only from the GP perspective.

All interviewees had some experience using, or trying to use, the BNP. I think I can go as far as to say that most interviewees were relatively positive about the Bay Navigator Initiative, but at the same time interviewees were extremely mindful of possible negative effects. The implementation of use was very low – twice a week for a GP working five-tenths was the best estimated use from the cohort. This supports the findings of Eloainio\textsuperscript{74} that a positive attitude to guidelines does not necessarily lead to use of the guideline.

Developed Bay Navigator Pathways were made available without sufficient practical support for doctors and practices to flawlessly implement it into daily practice. Then GPs, who are dealing with undifferentiated problems all day, may put the BNP on the back burner and are unable to use it when indicated. Delamothe\textsuperscript{75} and Farguhar\textsuperscript{73} put lots of emphasis the loss of autonomy of the doctor when using guidelines. Although the perceived loss of autonomy was mentioned by one participant, it was less common than I anticipated. Another surprising effect in the data is the minimal influence of doctor characteristics on the frequency of use of the BNP. Age, sex and years in the WBOP did not visibly affect the use and attitude of the interviewees towards the BNP. One interviewee, who is well engrained in the Pathway process, did mention age as a barrier for change in practice habits.

As expected, nearly all interviewees mentioned the barrier of time: not enough time to attend education sessions regarding the BNP, not enough time to browse the website, fifteen minute consultations not enough time to integrate yet another element into the consultation structure, preferring to use “copy and paste” options for referral letters rather than doing yet another tick-box eReferral etc. However, some interviewees mentioned that using the BNP was reassuring for completeness of care – which may be worth more than saving time. A sense of burden was created by trying to add yet another requirement (implementing the BNP) on top of all the other responsibilities. “The bigger picture” where BNP are not an “added extra” but in fact an alternative streamlined process, was mentioned.

One interviewee felt that the low use of BNP was a consequence of employment roles. GPs that did not have patients registered under their care are thought to be less likely to use the
BNP. BNP do not just cover medical areas of chronic care. There are multiple Pathways relating to conditions that are common in the workload of this cohort of GPs for example management of otitis media. More interviewees remarked that Bay Navigator Pathways should be more valuable and frequently used by GPs working as locums and new to the area.

Interviewees mentioned mainly medico-legal risks regarding the use of the BNP, because of changes to the normal processes in general practice that GPs were well used to. New practice habits that were congruent with current practice routines, but incorporated BNP, need to be developed. This would be necessary to reassure GPs that BNP could be incorporated into medico-legal sound practice. However, a participant felt empowered by the BNP because the local specialists support the BNP. Therefore using the BNP was seen as adequate defence if there should be questions about GP management.

Table 7.7: Barriers and facilitators identified regarding GP work environment

<table>
<thead>
<tr>
<th>EFFECT ON THE GP</th>
<th>Barriers</th>
<th>Facilitators</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cookbook medicine</td>
<td>Fit in with bigger picture of delivery of care</td>
</tr>
<tr>
<td></td>
<td>Too busy</td>
<td>Time efficient once implemented</td>
</tr>
<tr>
<td></td>
<td>Too many other responsibilities</td>
<td>Reassuring for adequacy of care</td>
</tr>
<tr>
<td></td>
<td>Employment roles may prevent applicability to practice</td>
<td>Local BNP for GPs new to the area</td>
</tr>
<tr>
<td></td>
<td>Change of work routines caused by BNP can lead to insecurity</td>
<td>Change of work routines can lead to new normalization once implemented</td>
</tr>
<tr>
<td></td>
<td>Medico-legal concerns due to change in routine</td>
<td>Medico-legal: safety in local specialist description of best local care delivery</td>
</tr>
<tr>
<td></td>
<td>Service shifting without resource following</td>
<td></td>
</tr>
</tbody>
</table>

7.2.4 Barriers and facilitators identified towards the effect on the patient
As anticipated, there was much discussion about the difficulty to fit patients into the “boxes” when following pathways. Having patient orientated pathways, as described by Van Weel\(^67\), would be a solution to this problem. However, I would argue that every patient does have a pathway, called the shared decision management plan. This cannot be developed by anybody except the patient and the treating GP in negotiation, considering all the relevant clinical and psychosocial factors. Bay Navigator Pathways were developed for single
conditions, and when referring patients with multi-morbidity, the effect of other conditions should be made clear in free text in an eReferral, or by mentioning it as deciding factors towards referral guidelines. Atypical patient presentations were not mentioned in literature, but are mentioned by interviewees towards difficulty to get patients accepted for hospital services as they do not “tick all the boxes.”

Patient expectations of management may be based on earlier practice realities, when care was situated mainly in secondary and very few investigations were done or requested through primary care. Such patient expectations may be a barrier for patient acceptance of the Bay Navigator Pathways. Interviewees mentioned that patients may not have the internet skills to use the Bay Navigator Pathways Website as a source of knowledge and reassurance. Interestingly, an interviewee working in a mainly disadvantaged community was most supportive of the advantages of patients’ access to the Pathway Website to inform the patients about their care path and intended investigations.

A newer initiative of the Bay Navigator is the development of CHIP and Eclair. At present, these are not yet available for use by patients to view their own medical records. Kenealy\(^{60}\) foresees that the Portal planned for the Canterbury region will one day be available for patients to view their own medical records, providing strict privacy requirements. It should revolutionize patient participation and interest in their own health journey – although the advantages and disadvantages thereof can be a research project on its own.

**Table 7.8: Barriers and facilitators identified regarding patients**

<table>
<thead>
<tr>
<th>EFFECTS ON THE PATIENT</th>
<th>Barriers</th>
<th>Facilitators</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fitting patient with multi-morbidity into standardized pathway is difficult</td>
<td>Improved access to community services</td>
</tr>
<tr>
<td></td>
<td>Atypical presentations decrease applicability of BNP</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Expectations of patients may vary</td>
<td>Patients may be reassured that GP treat them according to standardized pathways</td>
</tr>
<tr>
<td></td>
<td>Patients may not like website based pathways</td>
<td>Advantages of having access to patient and whanau to website based pathways</td>
</tr>
</tbody>
</table>
7.2.5 Barriers and facilitators identified regarding secondary care services

The issue of “professional dominance” (Kenealy\(^{60}\)) was evident in interviews. Prejudice towards some specialist groups was evident, the reason behind this was not always clear. There were notions from participants that the BNP empowered the GP when having to hand over care to the specialist service. It may be possible that patient discussion may be better structured due to the flowchart presentation of BNP. The BNP development process led to primary and secondary care doctors getting to know each other better. Knowing and understanding each other’s viewpoint was another reason for enhanced communication. On the contrary, there was also suspicion by a participant that the process of pathway development lent itself to certain services staying in the secondary domain, with the suggestion that these services could be placed in primary care. There was an element of mistrust regarding cost shifting. Dixon-Woods\(^{49}\) described “tribalism” where resistance to innovations can result from an attempt to guard professional autonomy, where the innovation was made suspicious as being externally imposed on the group. The BNP development groups were multidisciplinary, and this should be emphasised throughout the stages of diffusion of innovation.

Many participants mentioned that the primary care workforce is a hard working, dedicated group of people, striving to do appropriate and complete referrals to simplify the grading process by secondary care. Better transparency of the grading process, including who actually do the grading, was requested by interviewees. In the Canterbury region, McGeogh\(^{62}\) could illustrate positive inter-professional sentiments as a result of the HealthPathways. It is difficult to draw conclusions on the net effect of the BNP on inter-professional teamwork, but a study into this may be a research option for future.

Table 7.9: Barriers and facilitators identified regarding secondary care

<table>
<thead>
<tr>
<th>EFFECTS ON THE HOSPITAL SYSTEM</th>
<th>Barriers</th>
<th>Facilitators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preconceptions may hinder team communication</td>
<td>Secondary care receive appropriate and complete referrals</td>
<td></td>
</tr>
<tr>
<td>Suspicion regarding BNP imposed by secondary on primary</td>
<td>Team feeling can enhance care delivery</td>
<td></td>
</tr>
<tr>
<td>Suspicion regarding cost shifting (rationing)</td>
<td>Communication enhanced by pathways</td>
<td></td>
</tr>
<tr>
<td>Grading adequacy and who’s doing it</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### 7.2.6 Diverse barriers and facilitators identified in this research

Participants were a rich source of diverse information. Their focus was frequently wider than the Interview Schedule, with gems of knowledge and insight mentioned without any prompting. These original and possibly locally unique insights deserved attention. Review and audit of the Bay Navigator Pathways were regarded by the interviewees as something that must be done, but there was no certainty about it actually happening.

The effects of the BNP was not published or fed back to the users in a regular or predetermined way. This may support Grilli\textsuperscript{55} who found observability of an innovation is irrelevant to its use. I enquired about the audit and review of the BNP that was in place (in November 2015). In personal correspondence with the GP liaison, Dr. Caroline Davy\textsuperscript{93}, it was established that the only audit of use was requested by BOP ALT, and consisted of a monthly collated report on the internet hits for the various elements of the Bay Navigator Website. She also confirmed\textsuperscript{93} that review of all the older pathways were requested in March 2015 prior to the new Bay Navigator website going live. According to Dr. Davy, some GP leads and SMOs associated with the pathways did respond and gave feedback, although a 100% uptake was not achieved. She indicated that all BNP had an official two year review requirement, but that interim updates would be made if new guidelines or new processes came into play. These factors lead to my hypothesis that the GP workforce in the WBOP PHO distant themselves from the Bay Navigator processes. Everybody assumes that somebody else would oversee the processes. If the GP workforce was informed that the BNP were not being reviewed and audited as expected, it could lead to declining numbers of GPs being positive about this initiative.

Financial implications of the Bay Navigator Pathways were mentioned in a few diverse ways. These expenses related to the development of Bay Navigator Pathways, the dissemination of knowledge regarding the Bay Navigator Pathways and the costs to practices to update operational technology. The shift of services to primary care, made interviewees concerned about doing more work without remuneration, which is in line with the findings of McGeogh\textsuperscript{61}. There was no evidence of practice management interest in promoting the use of Bay Navigator Pathways. With IPIF and incentivizing patient management across primary and
secondary care, this may change in future as BNP can be an effective tool to achieve future performance indicators relating to this integrated cares.

As concluded by Robinson\textsuperscript{85}, BNP is not a means in itself. BNP is part of a whole system change, or even more important a whole mindset change about the delivery of care. There must be a genuine intent by all role players to deliver appropriate medical services to patients closer to home in their communities, with swift movement of the appropriate patients to secondary services, with documentation and workup complete. Although there are indications that some services are aligning, there is still not adequate acceptance and use of the BNP to properly get the ball rolling towards breaking down silos in healthcare delivery. A systematic review by Grimshaw\textsuperscript{107} suggested that a well designed implementation strategy possibly can improve physician acceptance, but this could not be confidently generalized to the BNP.

7.3 The context of the Bay Navigator Pathways

The “Better, sooner and more convenient” policy\textsuperscript{100} (2009) placed renewed attention on the delivery of care for the patient within the community was one of the driving forces for development of the BNP. Interviewees had more to say about the aim of the BNP towards the general practitioner and the secondary care services, with much less emphasis on the effect of the BNP on patient care. Aspects of patient care that were mentioned by interviewees included the standardization and the consistency of care delivery. The BNP could enhance the GP-patient interaction by informing the GP about the criteria for referral and correct baseline treatment and investigation, where-by patient care will benefit, even prior to referral. BNP should improve grading and patient access to the hospital system, although there were questions about primary-secondary interface adequacy.

7.4 Foundation elements of Bay Navigator Pathways

Bay Navigator Pathways are locally developed by inter-professional teams, to map out the care pathway for patients suffering from specific clinical conditions. The Pathways direct necessary diagnostic tests and treatment modalities that should be offered at specific stages of the management of a disease. The management and follow up of the disease is based in primary care, but predetermined red flags may speed up continuation of care in secondary service. The referral process is aimed to include all the steps taken already in primary care,
to ensure continuity and coordination of care, avoiding doubling up or missed baseline investigations prior to consultant appointment. As the Pathway was developed with local realities in care delivery in mind, the patient journey should be smooth across the interface between primary and secondary. All patients are treated equally through the Bay Navigator Pathways; therefore any existing or perceived inequality of health should be rectified by the Bay Navigator Pathways. Cost effectiveness is possible as a spin-off of the process, rather than being the focus of the process.

To deliver patient centred care, whanau or other support persons should be able to easily familiarize themselves with the Pathways. Even when the patient’s care is going to be continued in one or more secondary care departments, the primary care physician should be informed about the treatment plan on discharge for sleek continuation of care. Uniformity of care, where a transparent and standardized process confirms that all patients are referred in a timely manner, should also include a transparent and standardized triage process for grading in secondary care.

7.5 Quality of care in the WBOP PHO

Cornerstone\textsuperscript{90} is an accreditation programme, developed by the Royal New Zealand College of General Practitioners. It is both a quality assessment and quality assurance program. Through a self assessment and an externally evaluated process, general practices can become Cornerstone accredited. Through the recertification process general practices should maintain the high standards of aiming for excellence. Cornerstone meets the minimum legal and safety standards required by the New Zealand Public Health and Disability Act 2000\textsuperscript{12} for development, use and monitoring of a national consistent standard and quality program for organised General Practice services and patient safety. According to the WBOP PHO website\textsuperscript{19}, 27 practices in the WBOP PHO are Cornerstone accredited, although the accreditation date expired for five practices. It is not evident from the Website whether these practices are in the process of updating recertification.

The PHO Performance Programme (PPP) was replaced by The Integrated Performance and Incentive Framework (IPIF) in June/July 2014. In an Upfront interview with Dr. Richard Tyler\textsuperscript{91}, this new programme and the effect on primary care was discussed. Moving on from the PHO Performance program to The Integrated Performance and Incentive Framework, good patient care remains mandatory, but the new programme also strive to incentivize
smooth transition for the patient between primary and secondary services. As IPIF is a shared service standard measure between primary and secondary, there should be more collaboration and interaction between role players. IPIF foresee that more aspects of care should be delivered in the community. When looking at the WBOP PHO results for the period April to June 2015\textsuperscript{92}, indicators are still comparable with those seen in the PPP. How these results overarch into secondary, is not clear. The BNP can fulfil the role of bridging the gap between primary and secondary, but BNP is not part of the IPIF at present.

7.6 The Culture of Care

The notion of patient-centered care is accurately summarized by Brown\textsuperscript{95}:

Being realistic about patient-centered care necessitates mastery of several elements of the art of medical practice. Learning the best timing and time allotment for problems is essential. Teamwork and effective teambuilding also contribute to practicing realistically. Awareness of one’s own abilities and priorities both as a practitioner and as a person is critical in participating in interdisciplinary teams. Currently, issues of cost-containment and increasing demands of bureaucracy create the need for wise stewardship of the healthcare system’s resources. Ongoing advances in the area of information technology and evidence-based medicine will continue to influence the practice of patient-centered care.

The wheel of healthcare should revolve around the patient. To make many wheels move faultlessly and in synchrony, the engine behind healthcare delivery should be masterfully geared to run multiple components in an oiled, coordinated way. The Better, sooner and more convenient policy (2009)\textsuperscript{100} led the way for engine-room to be situated in primary care. As described before, the BNP will be one component that can facilitate primary care based care, with smooth interface to secondary care.

7.7 Clinical leadership

Although there has been a change in mindset with primary care now at the centre of service delivery, it appears as if the general practitioners do not grasp this. Every speciality has its boundaries of knowledge and expertise. However, an inferiority complex was sensed during the interview process.

Gauld\textsuperscript{96, 97} places a lot of emphasis on the importance of clinicians from all spheres to be involved in decision making structures. The necessity of clinical leadership across the board
was also reiterated by the Health Minister\textsuperscript{20}. General practitioners should be involved in the development and implementation of health initiatives. Clinical leaders should have integrity and support from their GP colleagues. If clinical leaders from across the healthcare spectrum can work together, making group-focused interests lower on their agenda, then a whole-system change can take place. Silos in healthcare must break down so that patient interest can be served uniformly across all sectors. With clinical leadership in general practice, these changes will be fed back and explained to the collegial cohort, minimising misunderstanding and suspicion.

Looking at the results of the research, clinical leadership did not achieve an understanding or buy-in from GP colleagues. In a 2015 study by McGeogh\textsuperscript{62} done in Canterbury, a similar barrier was described - namely the perception that guidelines were developed by experts who did not understand general practice. In this research, participants felt that that Bay Navigator Pathways were imposed on them. Another sentiment was that it was mainly the general practitioners that had to change their processes to fit around the Bay Navigator Pathways.

General practitioners seem to distance themselves from the collaborative workforce in healthcare, keeping themselves involved mainly with patient care. Eloainio\textsuperscript{74} is of opinion that healthcare occupation will become more complex and demand more multilevel expertise and participation. Participants in this research study did partake in collaborative activities, mostly through general practice leadership. There were three interviewees that partook in the Development of one or more of the BNP.

### 7.8 Strengths and weaknesses of the study

GP interviewees felt that it is positive that this research study was underway. GPs needed a platform to express their views about the BNP. Such communication and contact should be continued, as GPs’ positive attitude towards the BNP is essential to make it work. A foundation is laid now to build upon with future research and connection strategies.

The BNP is supposed to be integral part of the day to day practice of each GP in the WBOP. However, out of own experience and in discussion with other GPs, this is not the case. Teasing out the barriers and facilitators to use and acceptance of the BNP hopefully gives positive direction towards successful implementation of the BNP into everyday clinical
practice. BNP can enhance safety, cost effectiveness and patient satisfaction. The specialist services may receive better quality and complete referral letters which will smoothen grading and shorten waiting lists.

Inequalities in health outcomes may be improved if all of the abovementioned factors are positively influenced. This will be in accordance to the Treaty of Waitangi, and the Rights of Patients for fair, equivalent and high quality healthcare.

7.9 Meaning of the study: implications for clinicians and policy makers

Through this research study, one of my most prominent realizations is the mountain of skills required by the GP within the changed practice milieu. Are GPs adequately educated and skilled to be part of a multilevel healthcare workforce that demands strong clinical skills alongside management and collaborative attitudes? Does the GP education program (GPEP) foster these knowledge, skills and attitudes in a realistic way? It is important for GP educators to develop health management skills within the vast sea of medical knowledge, skills and attitudes that may currently receive more attention.

Knowledge of the BNP seems to be very haphazard. For reintroduction this element needs proper planning. The self study entity can be enhanced, maybe with the formulation of an online course or a study handbook to work through. This will provide the GP with some structure to self study and reflection. It can also be promoted towards the MOPS self directed learning initiative, in negotiation with the Royal New Zealand College of General Practitioners. For GPs that prefer to attend sessions, but find that the various barriers to attendance prevent them from doing so, technology such as podcasts can be used as well.

Most of the participants mentioned at least one aspect of the BNP where their expectations were unmet. Some of the expectations might have been unrealistic (for example for GPs to be able to arrange subsidised bone density studies), but unmet expectations led to disappointment and loss of interest. At the offset of this initiative, the enthusiasm created might have been the catalyst to “crack on” too quickly, missing some important foundation elements. However, a huge amount of work was put in and valuable discussions were held. IT design and development have ironed out some initial issues. Research done by McGeogh and Kenealy within the New Zealand health system on health Pathways.
confirmed positive outcomes. Developed Pathways can be updated and reintroduced, hopefully with fewer mistakes made and with better support. The trialability period for the Bay Navigator Pathways still has a window of opportunity to improve acceptance and use. Lessons learned through this research should be taken into account to improve outcome.

Practice owners should be engaged in the process of reintroduction. The effect on staff time and training, computer updates and other implementation costs on privately owned GP practices should be acknowledged. It will form part of the process to get practices to promote BNP as “the way we do it here” policy within the practices.

There is a dire need to be able to audit the use and impact of the BNP. Participants’ estimation of their use of the BNP was noted. There is currently no real way of getting more exact figures for use of the BNP. Some interviewees were interested in having feedback from specialists regarding the quality of referrals and on the effect of the presumed improved referrals on the hospital system. There are no systems in place at present to collate such information. More feedback may be a motivating factor for some non users to get aboard and trial the BNP.

Technological advances should make it possible to have better incorporation of the BNP across the different software systems used by different practices. Until such incorporation is practical, it should be best to have separate information sessions for users of different patient management systems. Then instructions for use can be clear and system specific, so that practitioners can relate to what they hear and see at the information evening. Strong collegial leadership should be encouraged. It will be supportive if there is a person nominated in each practice that can help struggling colleagues and staff. Such an arrangement may be part of the negotiated financial incentives between the WBOP PHO and practice owners.

With IPIF, I foresee that Bay Navigator Initiatives may become part of the incentives for across-all-services care. It will be beneficial to have better acceptance and use prior to incentivising the use of Bay Navigator Pathways. A purely financial driving force for change has negative spin-offs.
7.10 Unanswered questions and future research

Prior to this research, there was no readily available data on the views of the GPs in the Western Bay of Plenty regarding their acceptance and use of the BNP. In conversations there were conflicting views and some confusion about the BNP. This research project is a first step. There are so many elements of a new health innovation that they could not all be adequately covered by this research study. Medicine is an evolving science and with advances in technology it is an ever changing field. More work will be essential to plan for future health requirements in the WBOP PHO.

This research was focussed around the acceptance and use of the BNP by GPs. It is important to reiterate that the viewpoint of this study is experiences of solely a GP-cohort. There may be multiple other factors that come into play if patients and specialists were interviewed. Even within the general practice and wider primary care milieu practice nurses and other primary care workers’ insights should be obtained to create better understanding of all influential factors. The future of general practice will most likely include a larger cohort of nurse practitioners. One interviewee, who has experience of working with nurse practitioners, commented that nurse practitioners may use BNP more than GPs. This will be an area for future research.

Participants indicated adaption of their consultation structure to accommodate the BNP. A study on what adaptions were made will be interesting, with emphasis on potential for harm or advantage to the patient due to this process of change.

Research about an innovation development and implementation process is difficult to do in a single timeframe. This process is not linear, but has repetitive phases. This research does however give (at least) some introductory insights. Repeated phases of a similar research may inform about paradigm shifts and failures or successes through interventions.

7.11 Conclusion

Dixon-Woods concluded:

...there is no magic bullet in improving quality in healthcare. Rather, improvement requires multiple approaches, often apparently contradictory: strong leadership alongside a participatory culture; direction and control and also flexibility in implementation according to local need and critical feedback on performance without the attachment of blame.
The patient remains central in healthcare. What we do every day and how we work around obstacles can be tiresome and make us lose our vision for excellence in healthcare in our community. BNP can be a seen as an obstacle, but with adequate knowledge and practical support it can become a valuable tool in the GP toolbox. The process to change the mindset around the usefulness of the BNP is multi-factorial. There are no easy, paved ways exempt from unexpected occurrences. Greenhalgh\textsuperscript{46} described the unpredictability of interactions in different contexts and settings when having to implement new innovations. It is difficult –or even impossible- to determine success or failure when implementing change.

It is important to listen to the GP’s views, to empower them with knowledge and technical support, to give adequate feedback and allow redevelopment of weaker points to strengthen the BNP.

It will be great for the patients in the WBOP if we can “all sing off the same hymn sheet” if “this is how we do it here” can be a unanimous chorus for all health professionals.
References


93. Email Dr C Davy 11 Nov 2015 Unpublished data.


109. Ownership and employment workforce survey 2016. RNZCGP. 


Appendix A: Letters to Practices

An investigation into the barriers and facilitators of acceptance, and use of Bay Navigator Pathways by general practitioners in the Western Bay of Plenty

Dear Practice manager and General Practitioners,

I am writing to let you know about an exciting research project.

General Practice is a busy and demanding environment to work in. Time pressures, work load and stress associated with the responsibility can cause many GPs to feel isolated and under supported.

Bay Navigator Pathways have been specifically designed to help with managing complex patient presentations in general practice, and ease acceptance of referrals in secondary care (doesn’t this sound nice!) But we need to better understand how useful pathways are to GPs so as to make Bay Navigator Pathways reach their full potential.

Teasing out why General Practitioners do, or do not use, these pathways can inform Pathway development and facilitate change.

The research project’s aim is to:

1. To explore reasons for current variable uptake of Bay Navigator Pathways among GPs in the Western Bay of Plenty;
2. To identify barriers to use of Bay Navigator Pathways by GPs; and
3. Generate suggestions regarding improved utility of Pathways by general practitioner users.

I am sure that the knowledgeable group of General Practitioners at your practice be able to make a valuable contribution to the study.

With the investment of a one hour interview, Western Bay of Plenty GPs can be involved in ground-breaking research towards local care pathway development and implementation.
A reimbursement will be offered in the form of a $25 voucher to express my appreciation towards GPs’ expert input in the project or a donation to the charity of their choosing.

I am looking forward to the project with the support of your practice. This research will form the basis for a thesis towards obtaining a Masters Degree in General Practice.

In April/May 2015 I will contact selected GPs to request their participation.

___________________________

Dr. Anel Reyneke

If you have any questions about our project, either now or in the future, please feel free to contact either:

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Email: chrystal.jaye@otago.ac.nz

This study has been approved by the University of Otago Human Ethics Committee. If you have any concerns about the ethical conduct of the research you may contact the Committee through the Human Ethics Committee Administrator (ph +643 479 8256 or email gary.witte@otago.ac.nz). Any issues you raise will be treated in confidence and investigated and you will be informed of the outcome.
Appendix B: Information Sheet for Participants

An investigation into the barriers and facilitators of acceptance, and use of Bay Navigator Pathways by general practitioners in the Western Bay of Plenty

INFORMATION SHEET FOR PARTICIPANTS

Thank you for showing an interest in this project. Please read this information sheet carefully before deciding whether or not to participate. If you decide to participate we thank you. If you decide not to take part there will be no disadvantage to you and we thank you for considering our request.

What is the Aim of the Project?

The aim of the project is to explore reasons for current variable uptake in the use of Bay Navigator Pathways, to identify barriers regarding their use and to obtain suggestions from GP participants towards improving the Pathways.

This project is part of Dr. Anel Reyneke’s research towards a Master of General Practice at University of Otago.

Participants:

The Bay Navigator Pathways are locally unique, and the core users are General Practitioners in the Western Bay of Plenty. You have been selected because you are a GP in the Western Bay of Plenty.

What will Participants be asked to do?

If you agree to participate in the study, you will be asked to set aside one hour of your time to be interviewed by Anel. The interview can be conducted in your work environment, or at your residence. We can negotiate a time and date that will suit both of us.

The interview will last approximately 45 minutes, and I will ask you questions about various aspects of the Bay Navigator Pathways and your use of the Pathways. The interview will be digitally recorded, and subsequently transcribed.
The interview will be semi-structured. You are welcome to have a copy of these questions beforehand, although there are no “right” or “wrong” answers – your opinions and insights are of utmost importance.

Please be aware that you may decide not to take part in the project without any disadvantage to yourself of any kind.

A reimbursement will be offered in the form of a $25 voucher to express my appreciation towards your expert input into the project or a donation to the charity of your choosing.

This project involves an open-questioning technique. The general line of questioning includes what general practitioners understand the purpose of the Pathways to be; whether they feel that the use of Pathways improve patient outcomes; why general practitioners might or might not use the Pathways; what the barriers and facilitators to using Pathways might be; and what might encourage general practitioners to use the Pathways; suggestions for improvement of the Pathways. The precise nature of the questions which will be asked have not been determined in advance, but will depend on the way in which the interview develops. Consequently, although the University of Otago Human Ethics Committee is aware of the general areas to be explored in the interview, the Committee has not been able to review the precise questions to be used.

In the event that the line of questioning does develop in such a way that you feel hesitant or uncomfortable you are reminded of your right to decline to answer any particular question(s) and also that you may withdraw from the project at any stage without any disadvantage to yourself of any kind.

What Data or Information will be collected and What Use will be made of it?

Aside from the interview data, I will also collect information on gender, ethnicity, years in WBOP general practice, full time or part time GP, salaried or self-employed, and if your practice are rural or urban. This information will be collected to ensure that input from a wide range of general practitioners are taken into account. Once the interviews are transcribed and coding and analysis start, participants will be anonymised and will not be identifiable from any interview quotations in the completed research document.

The researcher, Dr. Anel Reyneke, and two supervisors, namely Assoc. Prof. C. Jaye and Prof. Time Stokes from the Department of General Practice and Rural Health, University of Otago, will also have access to the transcribed interview data prior to participants being anonymised.

A copy of the transcription of the interview will be made available to you to review and amend as you see fit. This will be done as soon as practically possible after the interview date.

A copy of the research project will be send to you once completed.

The data collected will be securely stored in such a way that only those mentioned above will be able to gain access to it. Data obtained as a result of the research will be retained for at least 5 years in secure storage. Any personal information[such as contact details, and digital recordings, after they have been transcribed etc.] will be destroyed at the completion
of the research even though the data derived from the research will, in most cases, be kept for much longer or possibly indefinitely.

The results of the project may be published and will be available in the University of Otago Library (Dunedin, New Zealand).

**Can Participants Change their Mind and Withdraw from the Project?**

You may withdraw from participation in the project at any time without any disadvantage to yourself of any kind.

**What if Participants have any Questions?**

If you have any questions about our project, either now or in the future, please feel free to contact either:
Dr. Anel Reyneke  
Papamoa Pines Medical Centre  
53 Domain Road  
Papamoa 3118  
Tel: 07 542 2450  
Email: anelreyneke@live.com

Or:  
Assoc. Prof. Chrystal Jaye  
Department of General Practice and Rural Health  
Dunedin School of Medicine  
University of Otago  
PO Box 56  
Dunedin 9054  
Tel 03 479 5767  
Email: chrystal.jaye@otago.ac.nz

Or:  
Prof. Tim Stokes  
Department of General Practice and Rural Health  
Dunedin School of Medicine  
University of Otago  
PO Box 56  
Dunedin 9054  
Tel: 03 479 7446  
Email: tim.stokes@otago.ac.nz

This study has been approved by the University of Otago Human Ethics Committee. If you have any concerns about the ethical conduct of the research you may contact the Committee through the Human Ethics Committee Administrator (ph +643 479 8256 or email gary.witte@otago.ac.nz). Any issues you raise will be treated in confidence and investigated and you will be informed of the outcome.
Appendix C: Consent Form for Participants

An investigation into the barriers and facilitators of acceptance, and use of Bay Navigator Pathways by general practitioners in the Western Bay of Plenty

CONSENT FORM FOR PARTICIPANTS

I have read the Information Sheet concerning this project and understand what it is about. All my questions have been answered to my satisfaction. I understand that I am free to request further information at any stage.

I know that:

1. My participation in the project is entirely voluntary;

2. I am free to withdraw from the project at any time without any disadvantage;

3. Personal identifying digital audio recordings will be destroyed at the conclusion of the project and transcriptions of these recordings will be retained in secure storage for at least five years and then destroyed;

4. An interview of approximately 45 minutes will be conducted at an appropriate venue of my choice. The time and date of the interview will be negotiated between me and the researcher to best suit both of us. The interview topic guide (the questions I will be asked) can be made available prior to the interview should I prefer this;

5. A copy of the transcribed interview will be made available for comments and amendments as soon as practically possible after the interview;

6. A reimbursement voucher of $25.00 will be made available to me or donated to a charity of my choice;

7. The results of the project may be published and will be available in the University of Otago Library (Dunedin, New Zealand), but every attempt will be made to preserve my anonymity;

8. In the event that the line of questioning does develop in such a way that you feel hesitant or uncomfortable you are reminded of your right to decline to answer any particular question(s) and also that you may withdraw from the project at any stage without any disadvantage to yourself of any kind.
I agree to take part in this project.

............................................................................. ........................................
(Signature of participant) (Date)

.............................................................................
(Printed Name)

This study has been approved by the University of Otago Human Ethics Committee. If you have any concerns about the ethical conduct of the research you may contact the Committee through the Human Ethics Committee Administrator (ph +643 479 8256 or email gary.witte@otago.ac.nz). Any issues you raise will be treated in confidence and investigated and you will be informed of the outcome.
Appendix D: Interview Schedule

Participant general information: *(might get this information from conversation prior to interview, or may be asked specifically during or after interview)*

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<td>Gender</td>
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<td>Ethnicity</td>
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<td>Years in WBOP general practice</td>
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<td>Rural/urban practice</td>
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<td>Solo/group practice</td>
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Interviewer disclosure:

Thank you for setting time aside today to discuss your views on the Bay Navigator Pathways with me.

I chose to research the Bay Navigator Pathways, because of my own experiences with patient’s ongoing care in clinical practice.

Please be assured that there are no right or wrong responses to any of my questions. Your insight and ideas are appreciated and highly valued. You were given an information sheet with more information about the research project, and thank you for signing the consent form. You are aware that the interview will be recorded.

*(Warm up question)*

Tell me a bit about your practice and a typical day for yourself in general practice:

Let us talk about the Bay navigator Pathways:

1. What is your understanding of why the Bay Navigator Pathways were developed? *(Alternative phrase can be why did BOP GPs need BNP?)*
* Probe: beliefs about Bay Navigator Pathways or what was the problem that they were designed to solve?

2. Were you involved with the development of any of the Bay Navigator Pathways?
   * If so – how does your involvement with the BNP development contribute to your use of the Pathways?

3. How often do you use the Bay Navigator Pathways?
   * Probe for reasons for use/non-use

4. How useful do you find the Bay Navigator Pathways?
   * Probe for barriers/facilitators

   *(Hopefully question 5 will be unnecessary if Question 4 discussion led into experiences)*

5. Can you tell me about specific experiences using the Bay Navigator Pathways?
   * Positive
   * Negative

   Probe for Barriers and facilitators

**Let us now try to make the use of the Bay Navigator Pathways practical & how you fit it into consultation:**

*(Use an example of a specific Pathway that the interviewee mentioned in Question 3/4/5)*

6. When your patient present with *(suspected colorectal cancer/suspected TIA/major joint OA)* – how will you integrate the Pathway into your management of the patient?

Probe for effect of Pathway on

- Doctor
- Consultation
- Referral process
- Patient & patient outcome *(?discuss this with patient, motivate patient to do required blood tests etc)*
7. In your view, how does the Bay Navigator Pathways affect the integration of primary and secondary care?

Bay Navigator pathways in the wider NZ context:

8. How do you see the future of Bay Navigator Pathways?

9. Which changes or improvements would you like to see in Bay Navigator Pathways?

10. Do you think that Bay Navigator Pathways may be suitable for use in other DHB?

11. Anything else you would like to mention?
Appendix E: Diffusion of innovation framework

<table>
<thead>
<tr>
<th>Development of Bay Navigator Pathways</th>
<th>Persuasion &amp; decision</th>
<th>Implementation</th>
<th>Sustain &amp; confirm</th>
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<tr>
<td>Understanding the aim</td>
<td>Barriers:</td>
<td>Practical referral impact</td>
<td>Integration of care Future of BNP National pathway suggestions</td>
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<td>Factors relating GP</td>
<td>REINVENTION ideas</td>
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<td>Practical referral impact</td>
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<td>Future of BNP</td>
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<td>National pathway suggestions</td>
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Understanding of the aim

Barriers:
- Factors relating patients
- Facilitators:
- Relating patients

Practical referral impact
Integration of care

Understanding of the aim

Barriers:
- Factors relating secondary
- Facilitators:
- Relating secondary

Practical referral impact
Integration of care
Future of BNP

GP culture: Systems, norms, leadership.
Appendix F: Ethical Approval letter

4 November 2014

Assoc. Prof. C Jaye
Department of General Practice & Rural Health
Dunedin School of Medicine

Dear Assoc. Prof. Jaye,

I am again writing to you concerning your proposal entitled “An investigation into the barriers and facilitators of acceptance, and use of Bay Navigator Pathways by general practitioners in the Western Bay of Plenty”, Ethics Committee reference number 14/187.

Thank you for your letter of response dated 30 October 2014, and for providing your revised documentation. Thank you for your response regarding the participant reimbursement. We note that you have amended the level of reimbursement to $25 or the option of a donation to the charity of choice, and removed reference to the term “honorarium”. We also note you have added the “open-questioning technique” clause to the Information Sheet.

Thank you for providing the Interview Guide, and your revised Information Sheet and Consent Form.

On the basis of this response, I am pleased to confirm that the proposal now has full ethical approval to proceed.

Approval is for up to three years from the date of this letter. If this project has not been completed within three years from the date of this letter, re-approval must be requested. If the nature, consent, location, procedures or personnel of your approved application change, please advise me in writing.

Yours sincerely,

Mr Gary Witte
Manager, Academic Committees
Tel: 479 8256
Email: gary.witte@otago.ac.nz

c.c. Assoc. Prof. C Jaye  Head of Department  Department of General Practice & Rural Health