

IMPROVING ACCESS TO PRIMARY CARE IN PORIRUA (PIA) EVALUATION

**A report to the Ministry of Health from the
Public Health Consultancy
Department of Public Health
Wellington School of Medicine and Health Sciences**

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CONTENTS

ACKNOWLEDGEMENTS	III
DISCLAIMER	III
ABBREVIATIONS	VIII
OVERVIEW	1
1 INTRODUCTION	8
1.1 Background	8
1.1.1 Intersectoral Community Action for Health (ICAH) projects	8
1.1.2 Porirua Improving Access Project (PIA)	9
1.1.3 Porirua Health Information Community Service (PHICS)	9
1.1.4 Otaki Community Health Worker (OCHW) project	10
1.1.5 Evaluation of the primary care projects	10
2 EVALUATION METHODOLOGY	10
2.1 Evaluation Aims and Objectives	10
2.2 Evaluation theory	10
2.2.1 Input-outcome model	10
2.2.2 Context-Mechanism-Outcome model	12
2.2.3 Evaluation theory vs intervention logic	12
2.3 Research methods	12
2.3.1 Timelines	12
2.3.2 Choice of parameters	13
2.3.3 Research themes	13
2.3.4 Qualitative methods	14
2.3.5 Quantitative methods	14
2.3.5.1 Intermediate outcomes	14
2.3.5.2 Health outcomes	14
3. PORIRUA IMPROVING ACCESS (PIA) PROJECT	16
3.1 Context	16
3.1.1 Community context	16
3.1.2 Primary care context	16
3.1.3 Provider profiles	17
3.2 Service development	17
3.2.1 Implementation	18
3.2.1.1 Funding allocation and contract signing	18
3.2.1.2 The role of Porirua Healthlinks	18
3.2.1.3 Implementation issues	18
3.2.2 Resources	20
 PORIRUA IMPROVING ACCESS (PIA) EVALUATION – DRAFT AS AT 3 MARCH 2006	 IV

3.2.2.1	Financial investment	20
3.2.2.2	Workforce	20
3.2.3	Relationship between PIA and SIA funded initiatives	21
3.3	Inputs	22
3.3.1	More appropriate health service provision	22
3.3.1.1	Community health workers	23
3.3.1.2	Mobile nurse service	25
3.3.1.3	Additional nurse services	27
3.3.1.4	Extended GP hours	27
3.3.1.5	Health education	27
3.3.1.6	Toiora programme	28
3.3.1.7	Pharmaceuticals subsidy	28
3.3.2	Better practice in primary care	29
3.3.2.1	Collective action	29
3.3.2.2	Links with other services	30
3.3.2.3	Workforce development	32
3.3.2.4	Intervention logic	33
3.4	Outcomes	34
3.4.1	Intermediate outcomes	34
3.4.1.1	GP and nurse utilisation	34
3.4.1.2	CHW and outreach nurse utilisation	40
3.4.1.3	Breast screening	40
3.4.1.4	Diabetes	42
3.4.1.5	Emergency department utilisation	45
3.4.2	Health outcomes	45
4.	PORIRUA HEALTH INFORMATION COMMUNITY SERVICE (PHICS)	48
4.1	Context	48
4.2	Service development	48
4.3	Inputs	49
4.4	Outcomes	50
5.	OTAKI COMMUNITY HEALTH WORKER (OCHW) PROJECT	51
5.1	Context	51
5.1.1	Community context	51
5.1.2	Primary care context	51
5.1.3	Provider profile	51
5.2	Service development	52
5.2.1	Implementation	52
5.2.2	Resources	53
5.3	Inputs	53
5.3.1	More appropriate health service provision	53
5.3.2	Better practice in primary care	54

5.4	Outcomes	54
5.4.1	Intermediate outcomes	54
5.4.2	Health outcomes	55
6.	ANALYSIS AND IMPLICATIONS	56
6.1	Summary of key points	56
6.2	Analysis	57
6.2.1	Evaluation methodology	57
6.2.2	Context	57
6.2.3	Service Development	58
6.2.3.1	Resources	58
6.2.3.2	Implementation issues	58
6.2.3.3	Relationship between PIA and SIA funding streams	59
6.2.4	Inputs	59
6.2.4.1	More appropriate health service provision	59
6.2.4.2	Better practice in primary care	60
6.2.5	Outcomes	61
6.2.6	Critical success factors	62
6.3	Implications	62
6.3.1	Ministry of Health	62
6.3.2	Capital and Coast District Health Board	62
6.3.3	Primary care providers	62
	APPENDICES	64
	Appendix 1: Full interview schedule with research themes and associated prompts	64
	Appendix 2: Data definitions used in the analysis of the PIA project	67
	REFERENCES	71

LIST OF TABLES

Table 1:	Dates of contract signing for PIA providers.....	18
Table 2:	PIA and PHICS funding package and service components.....	20
Table 3:	Overview of PIA workforce as at 30 June 2005	21
Table 4:	Service charges.....	22
Table 5:	Whitireia workshops: topics and attendance.....	33
Table 6:	Women screened in Capital and Coast DHB area, July 2001 to June 2003.....	41
Table 7:	ED presentations: age standardised rates per 1000 PHO enrollees (95% CI).....	45
Table 8:	Baseline data elements	67
Table 9:	Census area units selected for inclusion in the analysis	68
Table 10:	Areas with NZDepCAU values of 1, 2 and 3	68
Table 11:	Areas with NZDepCAU values of 9 and 10.....	69
Table 12:	Conditions included in the analysis of Ambulatory-sensitive hospitalisations	69

LIST OF FIGURES

Figure 1:	Input–outcome model diagram.....	11
Figure 2:	Timeline of staff employment: October 2002 – June 2004, all workforce categories	21
Figure 3:	Quarterly total utilisation rates (GP, nurse), by practice – excluding MeNZB consults	37
Figure 4:	Quarterly total utilisation rates (GP, nurse), by practice - including MeNZB consults	37
Figure 5:	Quarterly total utilisation rates (GP, nurse), by practice – Māori and Pacific	38
Figure 6:	Quarterly total utilisation rates (GP, nurse), by practice – Other ethnic group	38
Figure 7:	Quarterly total utilisation rates (GP, nurse) by quarter, by practice – NZDep quintile 5	39
Figure 8:	Volume of outreach services directly funded by PIA (12 months in 2003-2004).....	40
Figure 9:	Breast screening coverage by practice, April 2003 - June 2005	42
Figure 10:	Type 2 diabetes case detection - annual reviews completed vs MoH diabetes prediction	43
Figure 11:	Diabetes control by ethnicity	43
Figure 12:	Diabetes retinal screening	44
Figure 13:	Ambulatory-sensitive hospitalisations for Porirua City (0–74 years), 1994/95–2004/05	46
Figure 14:	Ambulatory-sensitive hospitalisations (0–74 years), by NZDep groups, 1994/95–2004/05.....	47
Figure 15:	Ambulatory-sensitive hospitalisations (0–74 years), by ethnic group, 1994/95–2004/05.....	47

ABBREVIATIONS

CAU	census area unit
C&CDHB	Capital and Coast District Health Board
DHB	District Health Board
FTE	full-time equivalent
GP	general practitioner
HNZC	Housing New Zealand Corporation
PIA	Porirua Improving Access project
ICAH	Intersectoral Community Action for Health
IT	information technology
KCHGT	Kapiti Community Health Group Trust
NGO	non-governmental organisation
OCHW	Otaki Community Health Worker project
PHC	Public Health Consultancy
PHICS	Porirua Health Information Communication System
PHLT	Porirua Healthlinks Trust
PHO	Primary Health Organisation
PUCHS	Porirua Union and Community Health Service
SIA	Services to Improve Access funding
WINZ	Work and Income New Zealand
WIPA	Wellington Independent Practitioners Association

OVERVIEW

Background

This evaluation reports on the Porirua Improving Access (PIA) initiative, the Porirua Health Information Community Service (PHICS), and the Otaki Community Health Worker (OCHW) project. PIA and PHICS were sub-projects of Porirua Healthlinks project and the OCHW project was sub-project of the Kapiti Healthlinks project. These Healthlinks projects are two of four Intersectoral Community Action for Health (ICAH) projects. These have been reported on separately to the Ministry of Health (*in publication*).

Data for this report was gathered in 2003-2004 and presented to the Ministry of Health as a baseline report but not published at that stage. This final report includes the baseline information and information for the follow up period 2004-2005 for the PIA project and for PHICS. Data for the OCHW project data was not collected in the follow-up round.

The PIA project was set up with the aim of improving access to primary care for people living in Porirua, with particular focus on reducing health inequalities for Maori, Pacific and low income or high need families. This involved the funding and development of a mobile primary care nursing (outreach nurses) and community health workforce and improved access to general practitioner (GP) consultations. This funding was given to existing service providers to allow an extension of services and was rolled out prior to the establishment of PHOs. Additional funding was allocated for some training workshops provided by Whitireia Community Polytech.

Five separate contracts with primary care providers were held under this project, these providers being:

- Wellington Independent Practitioners Association (WIPA) - involving all Porirua-based WIPA practices of which there were four in total. These practices later became part of the Tumai PHO which was established in April 2003, but continue to be affiliated with WIPA. In this report these practices are referred to collectively as WIPA/Tumai.
- Porirua Union and Community Health Service (PUCHS)
- Pacific Health Service
- Maraeroa Marae Health Clinic, and
- Ora Toa Health Services – referred to collectively as Ora Toa.

The Porirua Health Information Community Service (PHICS) was funded as part of the PIA project with the aim of providing information on health and disability services to the general population, and supporting information sharing between services.

The Kapiti Healthlinks report identified lack of access to information and services (including transport to existing services) as problems for Otaki, with its greater geographical distance from secondary services and higher needs population, and the need for improvements in access to primary care as high priorities for improving health and disability outcomes. The Kapiti Healthlinks report and plan recommended that ‘the funder funds two community health workers in Otaki as part of the primary care team’ (Porirua Kapiti Healthlinks Project 2000a: 85).

Evaluation methodology

The Ministry of Health contracted the Public Health Consultancy to undertake the evaluation of the ICAH projects in June 2001 and related sub-projects (PIA and OCHW projects). A new contract was signed in July 2005 to do a further round of data collection for the PIA and PHICS project only, covering the period July 2004 to June 2005.

Objectives of the ICAH evaluation overall were to:

1. Assess whether the PIA initiative has had, or is likely to have, a positive impact on health and disability outcomes;
2. Assess whether the PIA initiative has had, or is likely to have, a positive impact on health and disability outcomes for population groups experiencing worse health outcomes in the communities involved; and
3. Identify critical success factors for the projects.

These formed the primary objectives for the evaluation of the PIA and OCHW projects and for PHICS. More specific research themes were teased out during the baseline evaluation as follows:

1. Has the PIA project had (or is likely to have) a positive impact on health and disability outcomes?
2. Has the PIA project had (or is likely to have) a positive impact on health and disability outcomes for population groups experiencing worse health outcomes in the communities involved?
3. Is the PIA funding allowing for innovation or changes to practice?
4. How do the SIA and PIA funding streams or service components interact?
5. Is the PIA project reducing barriers to access?
6. What changes have occurred in the workforce as a result of PIA?
7. How does the work under PIA reflect integration and or co-ordination?
8. How has the infrastructure of the providers (such as access to facilities and cars) helped/hindered their ability to provide services and be innovative?
9. What does workforce development involve?
10. How effective has the Whitiwhiri training been?
11. What are the pros and cons of the PHICS components?
12. What have been the key critical success factors in implementation of the projects?
13. What role did the context play in the success or otherwise of these projects?

The evaluators used an input–outcome model to evaluate the PIA project to help identify and prioritise data to be collected for the evaluation. The intention was to use the information collected on primary care utilisation and ambulatory-sensitive hospitalisations to develop a picture of access to care, and to assess the appropriateness of the utilisation of services.

The purpose of analysing ambulatory-sensitive hospitalisation rates in Porirua was to set up an approach to monitoring changes. The aims of the analysis were to:

1. provide a basis for ongoing monitoring of changes in social gradients in ambulatory-sensitive hospitalisations in response to the ICAH interventions
2. establish a baseline with which to compare future rates of ambulatory-sensitive hospitalisations
3. help to evaluate equity of access to primary care and hospital services.

Ambulatory-sensitive hospitalisation data were purchased from the New Zealand Health Information Service for Porirua. These data were not collected for Otaki because the population was too small to make analysis of such data meaningful.

There were limitations inherent in both sets of data which influence interpretation of the findings. For utilisation, the evaluation relied heavily on data collected for contract management purposes by C&CDHB. The main reasons for using C&CDHB data was to reduce the reporting burden on the providers and improve comparability of data between providers participating in the project.

C&CDHB and providers have worked intensively to improve the quality of utilisation data and for many providers this involved upgrading equipment and upskilling staff. Prior to the PIA project there was no systematic collection of nursing outreach or community health worker data. This project had provided a means for measuring this activity in a transparent manner. All providers agreed to the collection of this data and business rules around it for consistency.

In interpreting utilisation data it is important to note that PIA funding related to primary care access commenced in November 2002, and capitation funding to Access-funded PHOs commenced on April 1 2003. From April 2003, both funding streams were in effect, and it becomes very hard to make judgements about the independent effects of either funding stream.

Nursing informants and data inputting technicians had commented that nursing outreach data and some of the community health worker activity may be under reported as it does not fit with an invoicing approach (PMS), which had been how much of the primary care data had been collected previously.

Contextual issues

The political, community and primary care contexts all were supportive of the projects in Porirua and Kapiti. The ICAH initiatives from which these primary care projects were born had high level political support. The Ministry of Health took a leadership role. As a result of these ICAH activities and community consultation surrounding them, there was a high degree of 'buy-in' and support from the community for initiatives to improve access to primary care.

The Porirua communities, through the Porirua Kapiti Healthlinks Project, had identified improved access to primary care as a high priority for improving health and disability outcomes for the people of Porirua. The Kapiti Healthlinks report similarly identified lack of access to information and services (including transport to existing services) as problems for Otaki. There was a high level of skill and energy available for community activities in Porirua and the Kapiti Coast.

Even prior to the ICAH projects, Porirua had a long history of health research and advocacy, with substantial health research taking place in Porirua over approximately the last 30 years. Porirua city had a distinct community identity. Kapiti similarly had pre-existing health advocacy groups, working both for the whole community and within the particular geographical communities.

In the primary care sector, the parallel process of establishing Primary Health Organisations meant that the PIA initiatives were working alongside complementary SIA initiatives. In addition, some providers were 'primed' to the outreach style of service delivery because their style was already geared in this direction prior to the PIA project. The PIA project was reported to have acted as a model for SIA services in Porirua in some instances.

All of these contextual factors were important features of the landscape in which the PIA project was operating.

Service Development

Resources included financial investment and the PIA workforce. The voluntary contributions made to the project were substantial and at times posed a risk of burnout for staff in some services. These contributions should be taken into consideration when viewing the 'real' cost of services to the providers and the ability to duplicate the services in other settings.

The service components funded through PIA were spread unevenly across the five providers but collectively covered all aspects of service delivery originally intended for the project. Each provider employed strategies that were intended to reduce the barriers to primary care as stated in the input-outcome model, these barriers being financial, information and transport related. Each provider also had aspects of improving practice quality included in their contract.

All providers spoke about the growth in the demand for access services over time due to increasing community awareness. What was noticeable during this period was the stable nature of the PIA

workforce. In 2005, employment of appropriate staff was still a problem for some providers. There were gaps in the Pacific and Maori nursing workforce, and the GP workforce. It was apparent that the provision of funding in itself was not enough to secure the appropriate workforce employment in these areas. There continued to be a significant amount of goodwill demonstrated by both staff and management of providers to ensure access needs were met. For example, weekend and evening work was often done voluntarily and staff attended training in their own time.

During the implementation of the PIA project a number of factors caused delays including:

- The previous competitive environment between providers
- The previous under-resourcing for the high level of health need and demand for services.
- Lack of strong working relationships between providers in Porirua
- Ongoing restructuring of the health sector which resulted in changes to some of the key health agencies involved in the development of the projects.
- The need to carry out further community consultation to be clear about community needs and manage community expectations;
- The lengthy process before contract negotiations also delayed implementation
- Inability to find suitable staff

As at June 2005 all the above factors had been resolved. Providers were co-ordinating services between themselves and between the two PHOs. Community engagement had been strengthened through specific projects such as Toiora; all contracts had been signed off; and the workforce had been stable over the past twelve-twenty four months and was increasing in confidence.

More appropriate health service provision

Providers identified benefits for themselves from the projects, including: having enough time to spend with clients to do their job well; having time to build relationship with their clients and within the sector; and the ability to see clients in the community which allows a better understanding of their health needs. Providers reported that clients were starting to change the way they interacted with services and that the clients had raised expectations.

The outreach mode of service delivery which characterises the PIA and OCHW projects was reported to have improved access for hard-to-reach clients in several ways including:

- The advantages for outreach staff (nurses and CHWs) of working in the community included being able to talk to people who have not previously accessed services, resulting in improved relationships with clients.
- Nurses and community health workers were able to spend an intensive amount of time at a family level providing advocacy, translation or transport services for clients.
- Working with patients in their home had enabled nurses and CHWs to observe first hand the broader determinants of health and to access support and advocate for the family to change some of the determinants.
- Working from a family perspective in the home or community provided opportunities to talk to other family members about a range of health issues.

Anecdotal evidence was provided of direct successes in terms of improved access to services, such as reduced GP waiting times and increased flexibility of hours (evening clinics or locum fill-in over lunch hours) which led to a decreased after-hours attendance (as people were being seen during working hours); and noticeable improvements in access for the hard-to-reach with greater frequency of visits and increased phone consultations. Providers reported that patients were now starting to view primary care services differently in particular seeing the nurse as a key part of primary care and having increased choice about how and where services were delivered.

High needs populations and those experiencing poorer health outcomes such as Māori and Pacific were accessing additional services under the PIA projects. Providers were able to identify a Tiriti o Waitangi framework as part of their intervention logic. Organisations such as Ora Toa and Maraeroa, that specifically serve predominately Maori communities, have been able to build capacity and develop services to improve access for Maori through the PIA project.

The PHICS project appears to be maturing and adding value to other information sharing strategies in Porirua. The intensive management received by PHLT and C&CDHB have allowed PHICS to benefit from lessons learnt from early difficulties, and plan for improvements.

The 2004 baseline report identified difficulties and weaknesses with the PIA project including role confusion, lack of strategic direction, lack of formal arrangements for teamwork between services, lack of data collection against which to measure change, and failure to meet community needs or engage the community (eg, the community garden and quarterly workshops). The 2005 interviews noted a more confident approach with the interventions therefore reducing some of the role confusion.

Better practice in primary care

Collective action across the PIA workforce, and between participating providers, developed over the period of the evaluation. All providers have worked to establish links relevant to their client base. Many links have been made within the health sector and externally. Some of the PIA providers have developed intersectoral partnerships and continued to build on these over the duration of the project.

There had been a notable increase in the knowledge and confidence of the workforce involved with this project. All providers have attended workshops funded by the PIA project and run through Whitireia Community Polytechnic. Workforce development was ongoing and had the commitment of both staff and employers. A number of staff interviewed commented that they received significant support from their organisations both in terms of training but also the trust placed in their ability to implement a range of interventions aimed at improving access.

The ability of providers to describe clear intervention logic developed greatly during the course of the project. At the outset there was no clear and shared understanding of intervention logic. However, by 2005 all participants acknowledged the wider determinants of health and the need to address these if health outcomes were to be improved.

Outcomes

Primary health care utilisation rates were measured over a relatively short period of time and largely serve the purpose of providing a baseline for future monitoring. It should be noted that the collection and use of primary health care utilisation data in Porirua is a relatively recent activity, and hence there is a limited data context in which to understand these findings. In the absence of longer-term trends data at this stage only preliminary observations can be made. Interpretation of these observations is made additionally challenging because of the difficulties of separating the effects of the PIA and SIA funding streams.

Two important outcomes that were expected as a result of PIA funding are 1) increased primary health care utilisation rates for all groups, especially Māori, Pacific and people living in deprived areas, and 2) a decline in the rate of ambulatory sensitive hospitalisations. In the case of GP and nurse utilisation increased rates did occur, but not at the expected time, and not in all PIA practices. In the case of ambulatory sensitive hospitalisations, rates remained reasonably steady during the period when the new funding streams were introduced, halting previous increases in rates.

In terms of combined GP and nurse utilisation rates, ICAH funding related to primary care access commenced in November 2002, and capitation funding to Access-funded PHOs commenced on April 1 2003.

- There was a marked increase in total utilisation in the quarter commencing 1/4/2004 in six of the practices with Improving Access funding (the Ora Toa practices, PUCHS, Waitangirua and Dr Gaus).

- Utilisation rates for Māori and Pacific people were somewhat higher in some of the practices (Ora Toa practices and PUCHS) which received PIA funding compared with those which were not receiving this funding.
- In the Ora Toa practices and PUCHS, utilisation rates for the Other ethnic group were higher than the rates for Māori and Pacific.
- In the Ora Toa practices and PUCHS rates for the Other ethnic group were higher than they were in practices not receiving Improving Access funding.

For ambulatory sensitive hospitalisations:

- Overall, ambulatory sensitive hospitalisations increased between 1994/95 and 2004/05.
- Rates remained reasonably steady during the period when the new funding streams were introduced, halting previous increases in rates (this finding applies overall, and to Māori, Pacific and those living in the most deprived areas).
- There were much higher rates of ambulatory sensitive hospitalisation for people living in the most deprived areas compared with those living in the least deprived areas, and for Maori and Pacific Island people compared with non-Maori and non-Pacific people.

For diabetes detection and control:

- Overall there was a relatively high annual check rate for people with diabetes.
- Overall diabetes case detection was lowest for Māori.
- Improvement was observed in diabetes control ($HbA1c < 8$) in Porirua Plus over the period 2003-2005.
- Overall diabetes control ($HbA1c < 8$) was poorest in the Pacific group.
- Retinal screening rates were similar in all ethnic groups, and no trends were discernable over the period 2003-2005.

For emergency department utilisation:

- Emergency department utilisation rates increased between 2004 and 2005 for Maori, non-Maori non-Pacific and the under fives, but remained relatively stable for Pacific.
- Rates were consistently higher for males than for females.

Critical success factors

The key critical success factors identified in the evaluation were leadership, experience and workforce development. The leadership provided by the Ministry of Health and the DHBs had been vital in establishing this project. The willingness to work closely and collaboratively with providers to develop the necessary reporting structures was just one aspect of this. Strong community leadership had also been exhibited by providers who were willing to work collaboratively and show initiative. There were some good examples of collaboration in the community, although some informants report that there was a need for collaboration to be developed further.

Those agencies who were already experienced in this work were in a position to extend the vision of community engagement to include more innovative approaches to improving primary care access; however, some of these approaches were not immediately successful and required reworking.

The provision of funding for workforce development had been important in fostering inter-provider relationships and had provided an opportunity for self-directed training geared specifically to the primary care workforce needs.

Implications

The PIA project was a government initiative, supported from the outset by the Ministry of Health. Results of this evaluation indicate that the initiative had been successful in fostering innovation and reducing barriers to access. The main implication for the Ministry of Health is that if this style of primary health

care provision is to be sustained, there is a need for ongoing dedicated funding which allows for flexibility of approach.

C&CDHB had made a large investment in this project in terms of commitment to the kaupapa, intensive management of the contracts and improving the quality of data provided by way of quarterly monitoring reports. The foundations of this initiative have been laid, and its maintenance would be relatively easy given adequate funding. It is important to note that there had been a deliberate approach to prevent any potential for double funding so all Services to Improve Access initiatives were additional to and separate to PIA services, staff and projects. The main implication for C&CDHB is that PIA funding would need to be sustained if this initiative is to continue.

There have been significant transaction costs for PIA providers with almost two years of 'process' before contracting as well as major new management requirements for recruitment, reporting and participation in community consultation and feedback, and in the evaluation process. These additional requirements were largely unfunded. New staff were in place and providers were developing trust, familiarity and cohesion within and across providers and communities. Outreach had been successful in identifying more need and creating better links with the result of more demand on practice-based staff. There had been limited ability to expand due to facilities, recruitment difficulties etc. The gains made on the ground would be relatively easy to maintain given ongoing funding.

1 INTRODUCTION

1.1 Background

This evaluation reports on the Porirua Improving Access (PIA) initiative, the Porirua Health Information Community Service (PHICS), and the Otaki Community Health Worker (OCHW) project. PIA and PHICS were sub-projects of Porirua Healthlinks project and the OCHW project was sub-project of the Kapiti Healthlinks project. These Healthlinks projects are two of four Intersectoral Community Action for Health (ICAH) projects. These have been reported on separately to the Ministry of Health (*in publication*).

Porirua Healthlinks Trust (PHLT) provides the infrastructure for advancing the goals and objectives of the overall ICAH project in Porirua city, and was the result of a range of activities begun in 1999. The goals and objectives have been derived from the recommendations in the *Porirua City Health and Disability Report and Plan 2000* (Porirua Kapiti Healthlinks Project 2000b). PHLT's vision was to provide community leadership and a sustainable voice for the priorities of the people of Porirua. The intended outcomes were improved services and better health and disability outcomes. A wider health determinants focus was identified as a necessary approach for improving health outcomes.

Data for this report was gathered in 2003-2004 and presented to the Ministry of Health as a baseline report but not published at that stage. This final report includes the baseline information and information for the follow up period 2004-2005 for the PIA project and for PHICS. Data for the OCHW project data was not collected in the follow-up round.

1.1.1 Intersectoral Community Action for Health (ICAH) projects

The ICAH projects began in response to local community concerns about health issues in Porirua, Kapiti, Counties Manukau and Northland. The Ministry of Health took a leadership role in supporting and developing intersectoral initiatives to address health disparities in these communities, in line with the Government's key health strategy documents.

Other policy influences included overseas models of community engagement, specifically the health action zone (health action zone) model in the United Kingdom, and District Health Board (DHB) concerns at health disparities and high health service utilisation in New Zealand. The Ministry of Health's support for the four ICAH projects included funding to facilitate the development of project plans and, in some areas, provision of expertise in analysis and project management.

The overall objectives of the ICAH initiative were to:

- improve health and disability outcomes in the community, particularly for Māori, Pacific peoples and population groups who have worse outcomes
- develop initiatives that address health outcomes, broadly understood
- harness the support and involvement of local authorities, iwi and agencies responsible for health, housing, transport and education
- harness the wisdom and expertise of local communities, including providers, along with that of policy makers, planners and funders
- develop intersectoral capacity for successful joint community action across sectors
- pilot and evaluate the current initiatives so the lessons learnt can be included in guidance to DHBs.

ICAH sites gave priority to geographical communities where there were:

- communities with a population greater than 10,000
- Māori comprising over 20% of the population
- a high relative deprivation (NZDep96 index deciles 8–10)
- significant health disparities between, Māori, Pacific and other populations
- projects based on the principles of community engagement and development
- projects that were intended to tackle the wider determinants of health status, as well as improving access to health and disability services
- places where the community was willing and capable to engage in intersectoral approaches.

1.1.2 Porirua Improving Access Project (PIA)

The Porirua Healthlinks report (Porirua Kapiti Healthlinks Project 2000b) identified improved access to primary care as a high priority for improving health and disability outcomes for the people of Porirua. The recommendations included:

- funding community health workers as part of primary health care teams
- funding an information and service co-ordination centre
- funding free and increased nursing services in general practices, public health and primary providers
- piloting the impact of substantially free general practice consultations, including after hours, and medicines for Community Service Card holders.

The PIA project was set up with the aim of improving access to primary care for people living in Porirua, with particular focus on reducing health inequalities for Maori, Pacific and low income or high need families. This involved the funding and development of a mobile primary care nursing (outreach nurses) and community health workforce and improved access to general practitioner (GP) consultations. This funding was given to existing service providers to allow an extension of services and was rolled out prior to the establishment of PHOs. Additional funding was allocated for some training workshops provided by Whitireia Community Polytech.

Five separate contracts with primary care providers were held under this project, these providers being:

- Wellington Independent Practitioners Association (WIPA) - involving all Porirua-based WIPA practices of which there were four in total. These practices later became part of the Tumai PHO which was established in April 2003, but continue to be affiliated with WIPA. In this report these practices are referred to collectively as WIPA/Tumai.
- Porirua Union and Community Health Service (PUCHS)
- Pacific Health Service
- Maraeroa Marae Health Clinic, and
- Ora Toa Health Services – referred to collectively as Ora Toa.

Outreach nurses were employed by all providers except for Maraeroa. Community Health Workers were employed by Pacific Health, Maraeroa and PUCHS. Extended GP services were provided by WIPA, PUCHS and Ora Toa.

1.1.3 Porirua Health Information Community Service (PHICS)

The Porirua Health Information Community Service (PHICS) was funded as part of the PIA project with the aim of providing information on health and disability services to the general population, and supporting information sharing between services. The need for health information was identified by the

Porirua Kapiti Healthlinks Project (2000b), and was reinforced through subsequent community consultation done by them. Healthlinks took responsibility for finalising the plan for PHICS,¹ establishing provider representative and community governance groups, and recruiting a project co-ordinator to plan and oversee its establishment.

1.1.4 Otaki Community Health Worker (OCHW) project

The Kapiti Healthlinks report identified lack of access to information and services (including transport to existing services) as problems for Otaki, with its greater geographical distance from secondary services and higher needs population, and the need for improvements in access to primary care as high priorities for improving health and disability outcomes. The Kapiti Healthlinks report and plan recommended that 'the funder funds two community health workers in Otaki as part of the primary care team' (Porirua Kapiti Healthlinks Project 2000a: 85).

1.1.5 Evaluation of the primary care projects

The Ministry of Health contracted the Public Health Consultancy to undertake the evaluation of the ICAH projects in June 2001. The evaluation objectives agreed by the Ministry of Health and the Public Health Consultancy at this time included assessing the processes and outcomes of one project in each ICAH region. These projects included the Porirua Improving Access (PIA) project, with the related Porirua Health Information Community Service (PHICS), and the Otaki Community Health Worker (OCHW) project. A new contract was signed in July 2005 to do a further round of data collection for the PIA and PHICS project only, covering the period July 2004 to June 2005.

2 EVALUATION METHODOLOGY

2.1 Evaluation Aims and Objectives

The primary aim of the initiatives evaluated here was to improve access to primary care in Porirua and Otaki for Māori, Pacific and low income people.

Objectives of the ICAH evaluation overall were to:

4. Assess whether the PIA initiative has had, or is likely to have, a positive impact on health and disability outcomes;
5. Assess whether the PIA initiative has had, or is likely to have, a positive impact on health and disability outcomes for population groups experiencing worse health outcomes in the communities involved; and
6. Identify critical success factors for the projects.

These formed the primary objectives for the evaluation of the PIA and OCHW projects and for PHICS. More specific research themes were teased out during the process of the evaluation and are listed in the research themes section below.

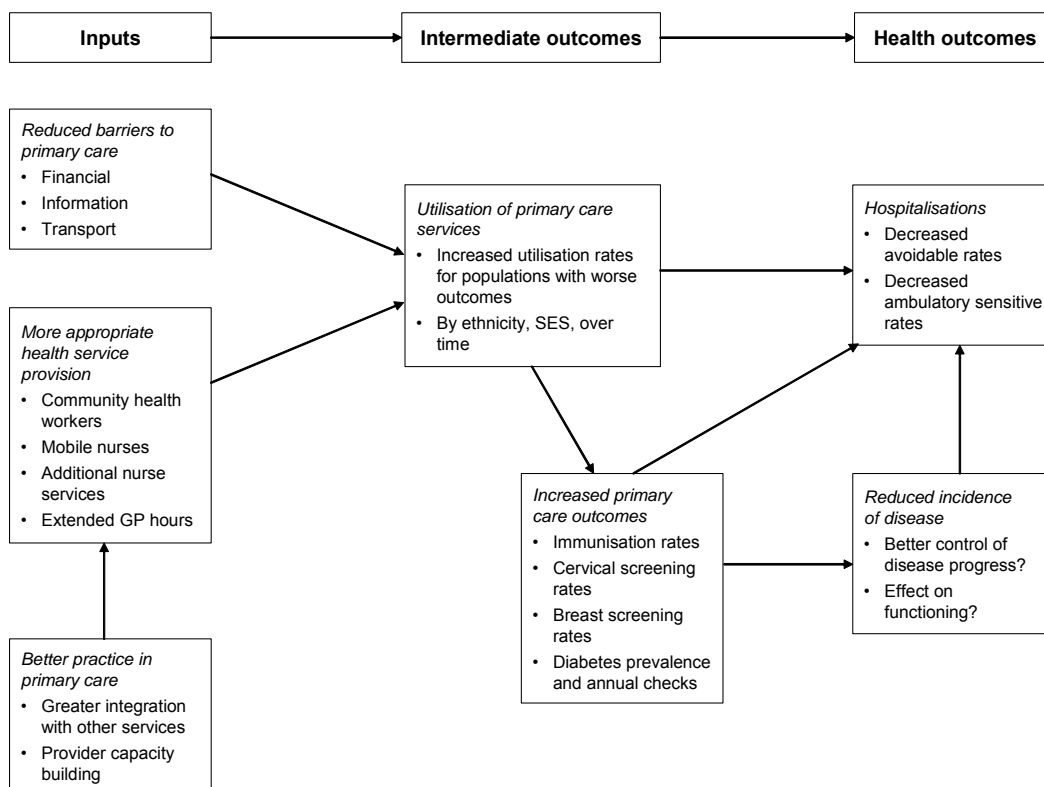
2.2 Evaluation theory

2.2.1 Input-outcome model

The evaluators used an input–outcome model to evaluate the primary care project to help identify and prioritise data to be collected for the evaluation. The intention was to use the information collected on primary care utilisation and ambulatory-sensitive hospitalisations to develop a picture of access to care, and to assess the appropriateness of the utilisation of services.

¹ The Healthlinks objective of achieving better access is focused on improving the flow of health information, achieving better access to primary care services by those people with the greatest need, and achieving better access to services at Kenepuru Hospital.

Figure 1: Input–outcome model diagram



The model was based on the work of New Zealand and international researchers such as Van Norren et al (1989) and Crampton et al (2004). Van Norren et al proposed an action-oriented framework for performance monitoring in primary care which focused on intermediate variables that directly affect health status (expressed in this model as health outcomes), *and* which can also be influenced by primary care interventions (expressed in this model as inputs).

The inputs or interventions consist of a set of primary care services (CHWs, outreach nurses, extended GP hours) designed to be more appropriate for reaching people who were not previously accessing primary care services. Through these interventions, barriers to primary care (financial, information, transport), it is hoped, will be reduced. Improving primary care practice in general will enhance the ability of providers to deliver these services. Better practice in this instance includes creating greater integration between primary care services participating in this project and between these services and other health sector services (secondary or tertiary) and non-health sector services (such as housing, income and education). The indicator of greater integration is evidence of improved linkages² between organisations. Better practice also includes developing the capacity of providers, primarily through workforce development.

The key feature of the input–outcome framework is a set of intermediate variables that link the social and biological systems and which can be influenced by the inputs or interventions or policy. These variables

² Linkages in this context means relationships developed with key people in other organisations – these being other primary care organisations, other health sector organisations or outside of the health sector – which creates improved information sharing and opportunities for working together on joint projects. These linkages will be informal in most cases but may include signing of Memoranda of Understanding between organisations.

are shown in the diagram above and include utilisation of primary care services, and increased primary care outcomes such as improved rates of breast and cervical screening and immunisation.

Because other primary care initiatives, such as the development of primary health organisations (PHOs), have also affected primary care utilisation rates and ambulatory-sensitive hospitalisations, changes documented in this report can not be attributed to the projects. The analysis looks at primary care improvements overall.

2.2.2 Context-Mechanism-Outcome model

This evaluation pays particular attention to the context in which the initiatives were developed and carried out. The context of the initiatives evaluated here is described in detail in Section 1. The evaluators were guided by the concept of “realistic evaluation” which seeks to understand why a programme works, for whom and in what circumstances, as summarised in the formula (Judge and Bauld 2001).

$$\text{Context (C) + mechanism (M) = outcome (O)}$$

For PIA this would look something like the following:

Context		Mechanisms		Outcomes
Culture of the primary care practices prior to PIA; Impact of PHO implementation	+	New funding streams and the services they purchase	=	Process: Changes in culture Changes in service Intermediate outcomes: Utilisation rates Health outcomes: ASH

The context of a programme or initiative includes its personnel, its place, its past and its history. The programme creates mechanisms for change by modifying the capacities, resources, constraints and choices facing participants and practitioners. Realistic evaluation acknowledges that the relationship between the mechanism and outcome is dependent on its context. A programme introduces new ideas and/or resources into existing social relationships, meaning that evaluators need to investigate the extent to which existing structures enable or prevent this from happening.

2.2.3 Evaluation theory vs intervention logic

It is worth making the distinction between evaluation theory and intervention logic. The evaluation theory as stated above was developed for the purpose of providing a theoretical framework for the evaluation and was not widely shared with primary care providers. Understanding and communicating the intervention logic, or knowledge of the pathways by which various strategies are believed to be effective (i.e. how they work), was not a focus of this evaluation. However, data was collected in interviews to ascertain how well the primary care providers understand the logic of their own interventions.

2.3 Research methods

2.3.1 Timelines

Work began in April 2002 for the OCHW project and in November 2002 for the PIA project. The financial year of 1 July to 30 June was used for analysis of quantitative data to align with the C&CDHB funding cycle. The evaluation used data from 1994/95 to 2002/03 to establish a baseline, assuming that little change in quantitative measures would be seen in the first few months of operation. The same data were collected for 2003/04 and contributed to a baseline report presented to the MoH in December 2004. The baseline report was not published but formed the basis for determining questions to be answered in

the follow-up round of data collected for the 2004/05 period. The final evaluation report therefore covers the period from 1994/95 to 2004/05.

2.3.2 Choice of parameters

The evaluators met with staff from the Ministry of Health, Capital and Coast District Health Board (DHB) and providers to develop evaluation parameters and to agree on the rules governing access to data for the project. There was considerable discussion about the availability and relevance of the data applicable to the input and outcomes model of the project. The evaluation team also discussed with the governance or steering group of each provider how to make the evaluation of direct use to them. Qualitative and quantitative methods were used to collect the information. Intermediate outcomes and health outcomes identified in the input-outcome model above are quantitative in nature. The inputs are assessed via qualitative methods. Details of the methodology used are given in the following subsections.

In collecting information, we recognised that we were relying on the co-operation of the various providers involved. We have endeavoured throughout the project to use existing sources of information. Because the quantitative data required for the evaluation and the data required for contract management by Capital and Coast DHB was very similar, it was agreed that the same data would be provided for both purposes. This reduced the reporting burden on the providers and improved comparability of data between providers participating in the project.

2.3.3 Research themes

Research themes derived from the PIA baseline evaluation are listed below:

14. Has the PIA project had (or is likely to have) a positive impact on health and disability outcomes?
15. Has the PIA project had (or is likely to have) a positive impact on health and disability outcomes for population groups experiencing worse health outcomes in the communities involved?
16. Is the PIA funding allowing for innovation or changes to practice?
17. How do the SIA and PIA funding streams or service components interact?
18. Is the PIA project reducing barriers to access?
19. What changes have occurred in the workforce as a result of PIA?
20. How does the work under PIA reflect integration and or co-ordination?
21. How has the infrastructure of the providers (such as access to facilities and cars) helped/hindered their ability to provide services and be innovative?
22. What does workforce development involve?
23. How effective has the Whireia training been?
24. What are the pros and cons of the PHICS components?
25. What have been the key critical success factors in implementation of the projects?
26. What role did the context play in the success or otherwise of these projects?

The full interview guide with research themes and prompts under each heading is attached as Appendix 1.

Note: The context question was not asked during interviews but rather was drawn out in the analysis.

2.3.4 Qualitative methods

The input–outcome model identifies three main areas of inputs, being those which:

- reduce the barriers to accessing primary care and health promotion
- encourage more appropriate and acceptable service provision
- improve quality in primary care.

Input data was collected by qualitative methods, primarily from interviews using an interview guide to direct responses. The questions were used as a guide only, and further questions and discussion arose during the interview. There were also opportunities to ask questions of the evaluators. There was also an opportunity given for participants to comment generally on the projects.

The open-ended questions were aimed at exploring the critical success factors in the programmes and the concerns or issues. Themes explored in the baseline report included: progress of initiatives, barriers to progress, critical success stories, governance and management, relationships, progress on plans, and funding issues. Data presented in the baseline report prompted a range of further questions to be answered in the followup year 2004-2005. These are identified in the research themes listed above.

2.3.5 Quantitative methods

2.3.5.1 Intermediate outcomes

Utilisation of primary care services is a key intermediate outcome because there is evidence that good engagement with appropriate and effective primary care services enhances health outcomes for populations, especially those experiencing worse outcomes initially (Van Norren et al 1989, Crampton et al 2004). Thus, we collected data on utilisation of GPs, community nurses and community health workers, and analysed it (where possible) by ethnicity, gender and socioeconomic position, over the duration of the evaluation.

Where data were readily available, preventive and primary care intervention data such as immunisation rates, screening rates and diabetes checks have been collected and analysed (again by ethnicity, gender, age and socioeconomic position) over the duration of the evaluation. All intermediate outcomes data for Porirua were sourced from Capital and Coast DHB via quarterly monitoring returns as part of contract obligations. The evaluators worked in collaboration with staff at the DHB, sharing knowledge and resources.³ The OCHW project used the records of utilisation rates as provided to MidCentral DHB.

Variables excluded from the analysis include prescribing, referrals to outpatient specialist services and laboratory services. Routinely collected pharmaceutical data does not include patient domicile (only the domicile of the provider), and so it was not possible to determine NZDep for patients. Also, it was not feasible to assess the uptake of pharmaceuticals (the proportion of prescriptions presented but not collected). Data were not available from Capital and Coast DHB for outpatient specialist consultations. The research team considered that analyses of overall rates of prescribing and diagnostic tests would not provide relevant information for the evaluation.

2.3.5.2 Health outcomes

The input–outcome model identifies ambulatory-sensitive hospitalisations as a way of monitoring the longer-term outcomes of the project. ‘Ambulatory-sensitive’ hospitalisations are hospitalisations among

³ The 2000 Porirua and Kapiti reports used primary care data that were regularly collected by Health Benefits Limited from claims for GP visits (General Medical Services). These data were useful in these reports because they enabled comparisons of the different areas, identifying matters that are now being addressed in the projects. For the evaluation, though, the evaluators decided that it was not appropriate to use the HBL GMS data in the evaluation because they do not capture patient information (addresses, ethnicity) that is crucial for the analyses, they do not capture reasons for the visits, and the data are incomplete because they report only on subsidies claimed, not on all visits.

those aged 0–74 years that are potentially avoidable through prophylactic or therapeutic interventions deliverable in a primary health care setting (such as vaccine-preventable diseases, early recognition and excision of melanoma, and effective blood sugar control in people with diabetes). Avoidable and ambulatory-sensitive hospitalisations have been used in a number of countries to monitor the effectiveness of primary care and equity of access (Bindman et al 1995, Blustein et al 1998, Crampton et al 2000, Falik et al 2001, Kozak et al 2001, Fleming 1995, Majeed et al 2000, Niti and Ng 2003, Victorian Government Department of Human Services 2001, Oster and Bindman 2003). Analyses are usually carried out at a national or state level. Differences between socioeconomic and ethnic groups in ambulatory-sensitive hospitalisation rates have been analysed in some instances.

The purpose of analysing ambulatory-sensitive hospitalisation rates in Porirua was to set up an approach to monitoring changes. The aims of the analysis were to:

1. provide a basis for ongoing monitoring of changes in social gradients in ambulatory-sensitive hospitalisations in response to the ICAH interventions
2. establish a baseline with which to compare future rates of ambulatory-sensitive hospitalisations
3. help to evaluate equity of access to primary care and hospital services.

Ambulatory-sensitive hospitalisation data were purchased from the New Zealand Health Information Service for Porirua. These data were not collected for Otaki because the population was too small to make analysis of such data meaningful.

3. PORIRUA IMPROVING ACCESS (PIA) PROJECT

3.1 Context

3.1.1 Community context

Porirua city is made up of distinct 'villages' arising from the geography of the area. Socioeconomic differences are marked between these 'villages'. There is a rich cultural mix in the city, with mana whenua claiming distinctive indigenous rights alongside a strong but somewhat diverse Pacific presence. The community had a long history of health research and advocacy, with substantial health research taking place in Porirua over approximately the last 30 years (Porirua Kapiti Healthlinks Project 2000b). The level of health advocacy experience had built up over this period, resulting in substantial community and political infrastructures and partnerships.

The purpose of the PIA project, as a subproject of the Porirua ICAH, was to improve access to primary care services in Porirua. The goals and objectives for the ICAH were derived from the recommendations in the *Porirua City Health and Disability Report and Plan 2000* (Porirua Kapiti Healthlinks Project 2000b) referred to as the Healthlinks report. This report was the result of a collaborative process involving partnership between central government, local government, tangata whenua and other community members, and as such provides a good reflection of community concerns about health and health services. Key health statistics given in this report are provided in the following section.

3.1.2 Primary care context

The Healthlinks report identified a number of concerns about primary health care including that:

- For the number of people resident in Porirua, there are fewer GPs than average across New Zealand.
- Primary care issues of greatest concern were the high total cost of going to the doctor and getting medicines, particularly for people living in the Eastern and Western wards.
- Community groups and providers all wanted an easy way to get up-to-date information about health and disability services, and about staying healthy.
- Despite recent increases in services offered under a Maori kaupapa, community discussion identified the need for more services to be funded through Maori providers, and for mainstream services to become more culturally competent for Maori.
- There are few health and disability services provided by Pacific people in Porirua (Porirua Kapiti Healthlinks Project 2000b, xiii-xv)

Recommendations made on the basis of these concerns directly influenced the development of the PIA project.

Significant changes have occurred in the health sector during the time of the evaluation with the strengthening and further development of District Health Boards, the establishment of Primary Health Organisations (PHOs), and the greater level of scrutiny and reporting in many health contracts. In addition, the wider policy environment was conducive to the development of the projects such as the Local Body Amendment Act, He Korowai Oranga (Minister of Health 2002), and the Reducing Inequalities Framework (Ministry of Health 2002).

3.1.3 Provider profiles

The providers participating in the PIA project fall into two PHOs: Tumai mo te Iwi and Porirua Health Plus. These PHOs were both established in April 2003, which is around the same time as the PIA project was operationalised⁴. The Capital and Coast District Health Board is the funding body.

Tumai practices participating in the project include the Waitangirua Health Centre; Titahi Bay Surgery; Titahi Bay Medical Centre; Dr Jordan's surgery in Mungavin Avenue, Porirua; and Dr Gaus in Titahi Bay. These practices are affiliated with the Wellington Independent Practitioners Association (WIPA)⁵. Prior to the establishment of Tumai, these practices were funded on a fee-for-service basis. As at 1 April 2006, the funding formula was mixed. The enrolled population was 45,007 including 6,599 Māori and 5,498 Pacific people (MoH 2006a). Geographic coverage included Titahi Bay, Cannons Creek and Waitangirua.

Porirua Health Plus includes all of the other primary health care providers in the Porirua area, these being PUCHS, Ora Toa, Maraeroa and Pacific Health. Prior to the establishment of Porirua Health Plus, these practices were funded on a capitation basis. As at April 2006, the funding formula was access. The enrolled population was 12,981, including 3,761 Māori and 6,828 Pacific people (MoH 2006a). Geographic coverage included mainly Porirua East, Cannons Creek, and Waitangirua but could extend from Johnsonville to Pukerua Bay.

The members of Porirua Health Plus PHO are also members of Health Care Aotearoa, a national community health network of union, iwi, Pacific and community-owned primary care providers who were community-controlled and not-for-profit, and committed to providing services to low-income families and their dependants.

Each of the providers had an established governance mechanism. WIPA was governed by a board of trustees that included GPs, a practice nurse, practice managers and two community members from the greater Wellington area. Pacific Health also had a board of trustees that included self-elected representatives covering the Pacific nations of Samoa, Cook Islands, Tonga, Tokelau, Niue, Tuvalu and Fiji. PUCHS was governed by a policy board that included representatives from community and patient groups, along with staff representatives and the manager of the service. The Maraeroa Marae Health Clinic was governed by the Maraeroa Marae Executive and Health Management Committee. These groups were made up of community members and staff representatives. Ora Toa was governed by Te Rūnanga O Toa Rangatira Inc which had the mandate to represent the Ngāti Toa Rangatira iwi.

Prior to the PIA project, outreach work was already a feature of service delivery for PUCHS, Pacific Health and Maraeroa. Community health workers were already employed by these practices, with Pacific Health having the greatest capacity. The Tumai (WIPA) practices and Ora Toa did not employ community health workers prior to the PIA project. PUCHS and Ora Toa were already providing low-cost GP services relative to other practices in Porirua.

3.2 Service development

This section covers resources invested in the project and processes around implementation. Resources considered here included financial investment and voluntary contributions, actual service components and the workforce employed to deliver them. Processes include when the funding was allocated, provider contract signing, the process of setting up provider contracts for primary care services, issues around service implementation, and the process of staff appointment.

⁴ The first staff were employed for the PIA project in November 2002, with most staff on the ground in all providers for all aspects of the contracts by July 2003. This is discussed further in the following section on service implementation.

⁵ The original contract for the PIA project was signed with WIPA. WIPA was the main service provider contracted by the Greater Wellington Health Trust. WIPA had 46 member practices, including over 160 GPs and a similar number of practice nurses.

3.2.1 Implementation

3.2.1.1 Funding allocation and contract signing

Funding was allocated to the PIA sub-project in April 2001, and there was an extended period of planning. A working group was set up (after consultation with Healthlinks) to further develop the options and implement these as soon as agreement had been reached. The Primary Care Access Working Group was made up of representatives from the Ministry of Health, Capital and Coast DHB, the providers and other community representatives. Individual contracts were negotiated over a three month period from August to October 2002, were finalised in late October and signed between December 2002 and January 2003. Table 1 shows dates that contracts were signed by the provider and C&CDHB.

Table 1: Dates of contract signing for PIA providers

Provider	Contract signed by provider	Contract signed by C&CDHB
WIPA	12/12/02	17/12/02
Ora Toa	16/12/02	14/1/03
PUCHS	9/12/02	16/12/02
Maraeroa	9/12/02	16/12/02
Pacific Health Service	17/1/03	28/1/03

The first staff were employed in November 2002, with most staff on the ground in all providers for all aspects of the contracts by July 2003. PHICS development started by PHLT on 1 July 2003, with an establishment payment and ongoing contract signed on 23 October 2003, DHB signed on 21 November 2003.

3.2.1.2 The role of Porirua Healthlinks

Healthlinks had an initial role in the PIA project, as the project was seen to be directly influenced by the *Porirua City Health and Disability Report and Plan 2000* and the health needs identified in this report. Healthlinks saw their role in the project as facilitating community consultation, and advocacy for community voice. They progressed the project through the developmental phases of community consultation, facilitation with providers and funders to influence purchasing priorities, informing the scope of the project, and reflecting community need. As the project had progressed, providers 'got on with the job' and Healthlinks had little direct involvement with PIA after this time.

Most providers described the role of Healthlinks as ongoing and as 'keeping talking to the community', ascertaining community needs and advocating these on behalf of the community. However, there were some tensions at a provider level, with some saying they didn't see a role for Healthlinks 'in telling them how to do their job'. Differences were expressed as to the need for the advocacy and communication role depending on the size and strength of the provider.

MOH and DHB had a strong acknowledgement of Healthlinks' advocacy role and saw a need for an ongoing process of representing a community voice. A view was expressed by a one funding informant that Porirua Healthlinks could have been more proactive in this advocacy and facilitation role.

3.2.1.3 Implementation issues

During the contract negotiation some concerns were expressed by practice managers, community representatives on Healthlinks and the Ministry of Health. These related to:

- possible undermining of community control by the injection of significant funding into Porirua and the incorporation of new players, and
- possible fragmentation arising from competitive environment in which the providers were operating prior to the PIA project

In the early stages of the PIA project, the Ministry of Health were taking a leadership role. This created tension for Primary care providers and the DHB who considered that the Ministry should have more of an advisory role to enable the community voice to prevail. However, when the contract management role was devolved to the DHB in 2004, the key leadership role previously undertaken by the Ministry of Health diminished. All providers were very positive about their relationship with the DHB planning and funding team, in particular the support and advice they received. With the development of PHOs and plans for inclusion of a community voice at a PHO governance level, concerns about loss of community control were to some extent alleviated.

Early concerns about fragmentation were not reflected by service providers. Primary care managers reported a high level of support and co-operation between providers from the outset, with PIA staff from each of the providers meeting regularly. From interviews carried out in 2005 it was evident that competition was not an issue and examples of collaboration included workforce development, referral patterns between providers and joint projects between providers. One provider talked about a new environment of “tolerating competition” as one of the successes of the PIA.

Other implementation issues identified by participants included:

- The heavy investment of time required for the contracting process for the DHB and providers. The transaction costs were particularly high the smaller providers who had less overall capacity.
- Changes at an organisational and structural level which included: government policy;⁶ the introduction, implementation and clarification of the changes; changes in funder from the Health Funding Authority to the Ministry of Health and DHB; changes in roles between providers; and changes in project management. All these changes meant that new relationships had to be forged and new roles defined.
- Early demands for quantitative data, particularly for nursing and community outreach activity for those providers who had not been previously recorded it (see outcomes section for discussion of this issue).
- The inability of the smaller providers to employ staff ahead of receiving contract payments (in contrast with the larger providers who could).
- Elongated planning processes for some providers where lengthy community consultation was needed to manage community expectations and to gain community sanction. For example, Pacific Health had to account to seven different Pacific communities, each with specific needs.
- Difficulties finding appropriate staff, getting them up to speed and then retaining them, particularly for the Pacific workforce. Reasons given for the poor retention of Pacific staff included: lack of clarity of roles and responsibilities, lack of experience in the primary sector, difficulties adapting to a new organisational culture (Pacific staff had previously been employed by a Pacific provider and a union health clinic), and external personal issues such as travelling time to work.
- The parallel process of PHO development which affected the ability of some providers to meet deadlines because the existing workforce capacity was already stretched.
- The requirements for information technology (IT) capacity building and putting the quality systems in place which created delays in employing staff⁷.

By June 2005 these issues had been largely resolved.

⁶ An example of change in government policy was the Primary Health Care Strategy and the introduction of PHOs, which caused some confusion and delay to ICAH projects that were being rolled out about the same time.

⁷ By 2005 all providers had benefited by funding investment in IT support and had software programmes and technical support. This enabled more effective data collection. However this support was not funded from the PIA project, rather came mainly from the Māori Provider Development Fund and Pacific Provider Development Fund

3.2.2 Resources

3.2.2.1 Financial investment

Table 2 shows the funding package for PIA, including the information component (PHICS). These figures have been reconciled with the contracted amounts for each provider. Over the three years from 2002/03 to 2004/05 a total of \$3,213,318 (excluding GST) was invested in the project. Of this, nearly 38% went to the Tumai/WIPA affiliated practices in total over all years, and 47% was split across the other PIA providers. The remaining funding was allocated to PHICS and Pro Med.

Table 2: PIA and PHICS funding package and service components

Provider	Service components	Total for 2002/03	Total for 2003/04	Total for 2004/05	Total all years
WIPA	Mobile nursing/ GP visits/ Practice Nurse additional subsidies/ workforce dev	309,976	464,967	473,252	1,248,195
Ora Toa	Mobile-Triage nursing/ GP visits/ community worker/ workforce development	151,589	227,384	247,384	626,357
PUCHS	Mobile nursing/ community worker/ workforce development	141,912	212,868	232,868	587,648
Maraeroa Marae	Mobile nursing/ community worker/ workforce development	43,363	65,044	85,045	193,452
Pacific Health	Community worker/ workforce development	3,822	61,156	77,333	142,311
PHICS	Information service project	444,444			444,444
Pro Med	Pharmaceutical subsidies	22,222			22,222
Total (GST Excl)		1,117,329	1,031,419	1,115,882	3,264,629

Nurses and community health workers across all services routinely contributed voluntary hours to the project. This voluntary time consists of being called out or taking client phone calls after hours, being stopped for advice 'on the street', attending meetings at lunchtime or after work, working through lunch and tea breaks, doing paperwork outside of work hours, and doing study for professional development. None of this time was recorded. In some cases patients were given the nurse's home phone number. Although some services had a time-in-lieu policy, extra hours were often not claimed.

Some positions such as outreach nurses and community health workers were funded out of a combined general pool of primary care funding. This enabled among other things full time positions for nurses and community health workers as opposed to the part time workforce that existed for some of the smaller providers before PIA funding. What was evident was that the combined amounts available to providers allowed a range of initiatives to be implemented and without PIA funding a decrease in the number and scope of interventions would be inevitable.

3.2.2.2 Workforce

Individual provider contracts were negotiated over a three month period from August to October 2002, were finalised in late October and signed between December 2002 and January 2003. Figure 2 below shows the timeline of staff employment up to June 2004. The first staff employed were nurses from November 2002, followed by community health worker and GPs from March 2003. Most staff were on board by July 2003 with some fluctuation in the workforce between that time and June 2004, mostly due to staff turnover. The workforce remained fairly stable from July 2004 to June 2005 and for this reason is not shown on the following figure.

Figure 2: Timeline of staff employment: October 2002 – June 2004, all workforce categories

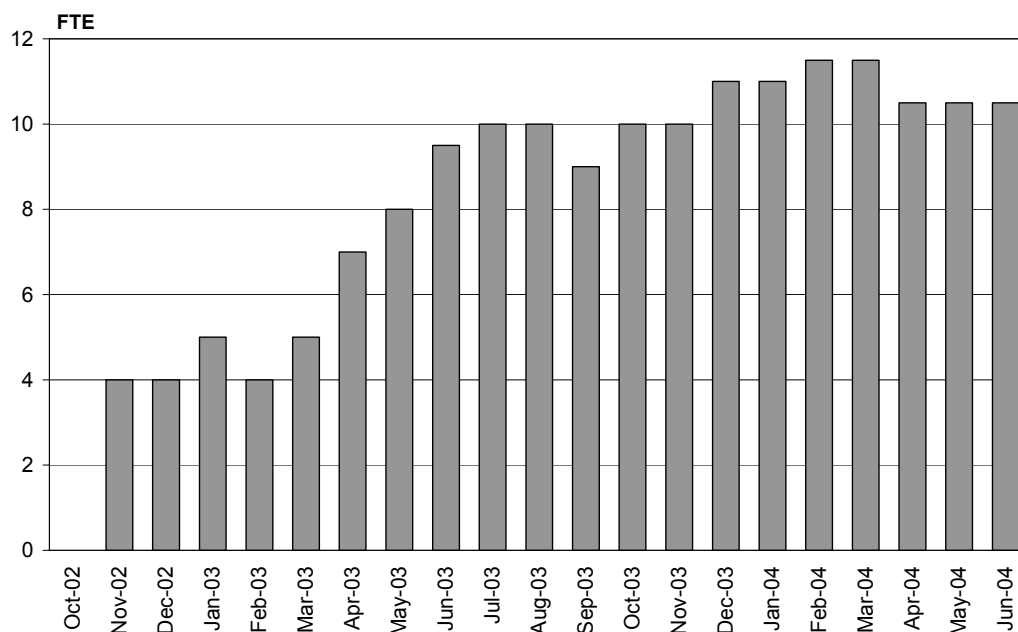


Table 3 provides an overview of the workforce employed to deliver services for PIA, as at 30 June 2005. As mentioned above, the workforce remained fairly stable over the period July 2004 to June 2005. However, there was a slight increase in capacity in this time for Pacific Health (CHW 0.5 FTE, nurse 0.5FTE) Tumai/WIPA (nurse 0.8 FTE) and Ora Toa (GP 0.1 FTE). At the follow up interviews, all providers spoke about the growth in the demand for access services since the beginning of the project.

Table 3: Overview of PIA workforce as at 30 June 2005

Workforce (FTE)	WIPA	PUCHS	Pacific Health	Maraeroa	Ora Toa	Total
Community health workers	0	1	0.5	1.5	0	3
Nurses	2.8	1	1	0	2	6.8
GPs	0.2	0.5	0	0	1	1.7
Other	1	0.3	0	0	0	1.3
Total	4	2.8	1.5	1.5	3	12.8

3.2.3 Relationship between PIA and SIA funded initiatives

The PIA and SIA initiatives were funded separately, although they were intended to be complementary and duplication of funding was avoided. The early stages of the PIA project pre-ceded the development of PHOs and of the SIA fund. Participants felt that the PIA initiatives allowed for increased diversity in approaches compared with previous approaches. The effect of SIA funding on diversity of approach was not a focus of this evaluation and therefore it is not possible to compare the two funding streams in this respect.

However, participants expressed the view that the PIA funding created gains separate from any other primary care initiatives, because of the additional funding it provided and the flexibility it allowed. They were concerned that this flexibility might be lost if the funding was delivered via the SIA stream. It was beyond the scope of this evaluation to comment on the validity of these views.

3.3 Inputs

3.3.1 More appropriate health service provision

The input-outcome model identifies barriers to primary care as being related to financial, information and transport issues. The intention is that the barriers will be reduced through the provision of more appropriate health services. Table 4 gives an overview of PIA service charges as at June 2005. The table shows that most services were free with the exception of GP visits for which fees were reduced, and the pharmaceutical subsidy which reduced the financial barrier to picking up prescriptions.

Table 4: Overview of PIA service charges as at June 2005

Primary care service	Charge	WIPA	PUCHS	Pacific Health	Maraeroa	Ora Toa
Extended GP hours	Reduced	Y	Y			Y
Nurse-led clinics	Free	Y	Y			Y
Nurse outreach	Free	Y	Y	Y		Y
Follow-up appointments	Free	Y	Y	Y		Y
Community health worker visits	Free		Y	Y	Y	
Prescription only	Free	Y		Y		Y
Pharmaceutical subsidy	Reduced					Y ¹
Diabetes support	Free	Y ²				Y ³
Transport to services	Free	Y	Y	Y	Y	Y
Translation services	Free	Y	Y	Y		

1. Selected items only.

2. Free visits for newly diagnosed diabetics

3. Free diabetes meters

PIA nurses and CHWs deliver health education sessions in the community routinely disseminate information. The PHICS component was also intended to contribute to the reduction of information barriers. PHICS experienced considerable teething problems but appears to be maturing and adding value to other information sharing activities in Porirua. See section 4 of this report for progress with the PHICS component.

All services provided some transport for patients to GP and specialist appointments and for picking up prescriptions as part of the PIA project. Funding for transport was also available through PHOs and both Porirua PHOs had a joint venture with Capital and Coast DHB to assist with transport. In the 2005 followup interviews with providers, transport remained a significant issue in terms of access and PIA funding was considered essential (in addition to PHO funded transport subsidies) to meet ongoing need. Transport was a significant aspect of service delivery for Pacific Health with about 60% of their clients being transported to outpatient appointments to provide advocacy and translation.

Each area of service provision - community health workers, mobile nursing, practice nursing, general practice and health education - is explored in detail the following sections.

3.3.1.1 Community health workers

The CHW workforce was largely unqualified in health, although some had worked in the community in other roles. They were generally employed for their networks in the community and their ability to create rapport and liaise with community members. They were generally engaged in an advocacy or capacity building role and work with whānau, often as part of a multidisciplinary team. CHWs made up the bulk of the Māori health workforce and covered a range of disciplines including housing, health and social services.

WIPA

Employment of community health workers was identified as an initial approach in the WIPA business plan and was seen to be part of an integrated team approach. None were employed, although there was a senior social worker taking up some of the work that may have been carried out by the community health worker. The social worker provided individual clients, whānau and practice staff with information on how to address barriers to health care due to social need arising from housing, WINZ and benefit advocacy, and links with other health providers, especially Te Roopu Awhina and the Taeaomanino Trust. There was also some ad hoc and occasional usage of community health workers employed by other services, but this arrangement was not formalised.

In the 2005 followup interviews WIPA identified a future need to employ community health workers especially in the area of youth work and accessing Pacific Church groups. However there was a reluctance to employ what were seen as unqualified staff. Nurses from one of the larger providers commented that perceptions of some GPs need to shift to enable greater diversity in the multidisciplinary team approach.

PUCHS

PUCHS employed a community health worker (an occupational therapist) to develop and manage an organic garden activity one day a week. PUCHS managed to engage a variety of groups and organisations to participate in the development, including youth at risk. The garden attracted positive attention from the news media and the PUCHS CHW gave presentations about the project in five public forums. The garden served as a mechanism for health professionals, CHWs and others, to work alongside people outside a clinical setting and share information. Providers considered this to be particularly valuable for youth, mental health consumers, refugees families and other people who often felt less comfortable in clinical settings. The garden remains part of a cluster of PIA interventions that are aimed at community engagement and capacity building.

In late May 2003 PUCHS employed another community health worker, initially at 0.8 FTE and later at 1.0 FTE, to continue with the garden project and to develop health awareness, group education and support, and community development workshops. The first of these workshops was scheduled to take place in September 2003 but did not eventuate. A number of reasons were identified by PUCHS staff, including low levels of community enrolments resulting from the timetabling of workshops.

Staff at PUCHS identified problems in the implementation of the community health worker role. One example given was that referring health professionals were confused about the role of community health workers (eg, community health workers were requested to follow up on clinical tasks such as people requiring blood pressure recordings, retinal screening etc). CHWs considered their brief to be too wide and without strategic direction. Suggestions for a better approach included using a strengths-based model, seeing clients within a family context, taking an integrated team approach by working with the nurse and having clearly defined roles.

In 2005 interviews with staff it was clear that the CHW and nurse were working closely together and that there were a number of clearly identified programmes in place to improve not only access but hauora or wellbeing. Ongoing infrastructure issues were identified as barriers to progress including inappropriate rooming to hold group sessions, systems unable to cope with the complexities of community development such as paying community volunteers, and lack of an overarching strategic plan in place to guide community development. The PUCHS Manager spoke of the challenges for her as one manager in a small organisation with increasing demands in the PHO environment. As at June 2005 there were plans to employ a clinical co-ordinator which may take some of this pressure off the manager.

Pacific Health

Pacific Health increased their community health worker hours by 0.5 FTE spread across their existing team of part time CHWs. Staff reported that these additional hours allowed for increased planning time and more flexibility in responding to client needs. All five island groupings were represented in the workforce. The manager spoke highly of the skill level in her CHW team commenting that they included elders, ex policeman, ex immigration workers, ministers' wives and some with medical training who were unable to register as doctors in New Zealand.

The CHWs worked as part of an integrated team with the nurses and social worker. Their main role was to provide health education information and support. Client advocacy took up a large amount of their time, especially translation and interpreting services, transporting clients, and working across agencies such as WINZ, Immigration and Housing New Zealand Corporation (HNZC) on behalf of clients.

Maraeroa

Maraeroa employed a full-time community health worker to do advocacy and support work such as health advocacy, WINZ advocacy, going with clients to food banks and transporting them to services. Due to increased demand for the service an additional 0.5 FTE worker was appointed in August 2004 funded by PIA. The service provided included intensive one on one support often requiring many interactions or interventions with clients and their families.

The CHW worked with Police and others towards the prevention of family violence and participated in the setup of the Providing Access to Health Solutions (PATHS) project in C&CDHB⁸, providing a community perspective on the information required for participants. More recently the community health workers organised a support group with mothers in the area focusing on health education. They also participated in a project to decrease DNA rates at Kenepuru Hospital. Both community health workers identified that they had credibility in the community as evidenced by a wide range of referrals to their service eg doctors, access nurses, government agencies, hospital staff and other NGO support groups in the area.

Ora Toa

Ora Toa initially employed an additional?? community health worker, but as there was increased demand for clinical nursing services in the community the funding was diverted into nursing services. The community health worker which was this if no longer funded was then subsumed into the Ora Toa health promotion contract. The community health workers worked well together with the nursing services at the Takapuwahia Health Clinic and the Ora Toa Health Unit (who have specialist health education nurses). They had contact on a daily basis and worked together on home visits.

⁸ The PATHS project was initiated by the Ministry for Social Development and is run in partnership with PHOs, Capital and Coast District Health Board and Work and Income. The project offers and individualised service to people who have been unable to work due to ill health. PATHS co-ordinators work with each person to bring together relevant services (health, social, employment) to aid their return to work.

3.3.1.2 Mobile nurse service

Mobile or outreach nurses are primary care nurses who work in the community while also working as part of an interdisciplinary team within the practice. Outreach work requires confidence in working autonomously and high levels of interpersonal skills and cultural awareness.

WIPA

WIPA/Tumai practices initially tried a model where additional nurses could potentially 'backfill' practice nurses, allowing existing nurses to do outreach. The WIPA/Tumai practices were reluctant to follow this model as existing nurses were not familiar with the outreach style of practice. The model was subsequently reworked to have dedicated outreach nurses. WIPA/Tumai employed approximately three community access nurses, who each have a caseload of about 20 to 30 people. The criteria for referral was not rigid and included patients that had any problem with access including medication changes, newly diagnosed, poor attenders, chronic illnesses with poor access to diagnostic or treatment services.

A part-time (0.5 FTE) team leader was employed, whose main role was to work within a clinical setting with all Tumai primary care nurses in Porirua to develop ways of ensuring that service outcomes were met which were, and to look for areas of improvement. Nursing services had become more flexible to fit around the patient, with nurses being able to work early mornings and evenings if their services were needed at these times - so only around time or other ways. Service flexibility had resulted in increased medication compliance and uptake of scripts from the pharmacy assertion.

At the outset of the project the PIA funding covered reduced fees for patients with co-morbidity, whole of family visits, free nurse clinics, improved access for newly diagnosed diabetics, targeted prescription subsidy and translation services. After WIPA became Tumai PHO the co-morbidity, targeted assistance with prescription costs and translation services no longer came under the PIA contract as they are funded out of PHO funding.

Referrals came to the nurses in a variety of ways by phone, through the WIPA computer system, or verbally. As at 2005 referrals had broadened out significantly. Nurses interviewed commented that there was a greater awareness of the services provided by the PIA nurses and improved linkages between primary and secondary services as evidenced by the increased referrals from outpatient services and improved discharge planning, in particular for Kenepuru Hospital.

PIA had provided an opportunity to develop a new nursing model for WIPA/Tumai practices; in particular it articulated a value for specialist nursing services that could "stand apart" from general practice. Nursing outreach programmes had not been carried out by WIPA/Tumai prior to this funding. It was noted that PIA nurses had helped develop increased co-ordination among specialist nurses working across services. For example Plunket, Maori and Pacific providers, and district nurses were communicating more effectively resulting in better co-ordination of family based care. However it appeared that PIA nurses were used to plug gaps in what was seen as other more pressing clinical practice needs eg WIPA/Tumai nurses commented that PIA activity had been reduced by the Menz B campaign.

Generally clients were seen individually, although occasionally families were involved, particularly with the social worker, who had a broader advocacy role. Clients were discharged when they were seen to be accessing services independently; others were monitored at a distance, and some remained on intensive intervention for a short period.

WIPA/Tumai nurses talked enthusiastically about their role and described the advantages of working in the community, including better access to patients who may not have been previously accessing services, improved relationships with patients, and improved medication compliance. WIPA had experienced some shifts in the culture of primary care delivery, with the role of outreach nurses starting to be recognised and mentioned more frequently at multidisciplinary team meetings.

PUCHS

PUCHS employed an additional primary care nurse, which freed up one of the more experienced nurses to spend time each week following up patients who for various reasons were not easily managing their own care or who were failing to keep appointments. However, as was the case with the WIPA/Tumai outreach nurses, this nurse was also used to plug gaps in what was seen as other more pressing clinical practice needs, for example to support clinical orientation of new practice nurse.

Outreach nurses work from a family perspective in the community, providing follow-up support and advice for the patient. The referral caseload appears to be patients not accessing services and those with serious health issues that would benefit from community follow-up. By 2005 there had been an improvement in the referral system with a clear process of consent to visits by the patient and written referrals from the practice nurse or doctor. In addition there was combined nursing and doctor outreach to patients in their home and nursing clinics aimed at improved access. The nurse spent an intensive amount of time providing explanations about illnesses to patients who were in denial or who did not understand the seriousness of their problems.

The nurses (like the community health workers) spoke of frustration at not having a strategic plan or direction to work from and the difficulties this had posed. The nurses' vision for future community outreach services was to have enough time to spend with people and work with their communities to identify need and to deal with issues holistically and early in the process to avoid serious health issues. They wanted to see outreach work having its own goals and objectives, rather than being governed by practice objectives. A strategic plan for PUCHS was subsequently drafted.

Pacific Health

The PIA funding allowed for an additional Samoan nurse to join existing outreach nurses⁹ therefore enabling the five broad population groups of Pacific people to be represented. This extended time had enabled more effective team planning. A flexible work environment allowed for extended hours of service with time-in-lieu policies. Some of the work is carried out in the evenings with clinics that provide "all things" for example immunisation catch ups, cancer screening and tamariki ora checks. The specific needs of Pacific consumers when engaging with mainstream services result in high costs to Pacific services, as Pacific health workers have to accompany about 60% of clients to appointments for translation purposes.

Ora Toa

Project funding had enabled Ora Toa to employ outreach nurses in the Cannons Creek, Takupuwahia and Mungavin Avenue Clinics. The expanded services include nurse triage, home visits, tracking non-attendance, tracking hard-to-reach patients, nurse specialist clinics, and improved co-ordination with a multidisciplinary approach. The increased role of the nurse had meant patients didn't always expect to see the doctor and therefore were able to access primary care services sooner because of the availability of the nurse. This adds to the development of a nurse led model of care.

Referrals were not formalised and patients could self refer by walking in or phoning; this included casuals. Referrals also came from other agencies such as Pacific Health and Maraeroa. The only criterion for access was the enrolment policy for Ora Toa; patients must live in the Porirua Basin and not be enrolled with another practice. All nurses rotated between clinic-based work and community outreach. Caseloads were shared, as was some individual client work. Workloads were high and complex, often with several people in a single household requiring assistance.

The nurses played a strong advocacy role with specialist services and often attended outpatient clinics with patients. One example of advocacy involved addressing an inappropriate response from a specialist in secondary services, who had written to a patient in what the nurses and patient considered was a 'rude and arrogant' manner. Nurses worked closely with the doctors creating a seamless service and they noted

⁹ Nurses and community health workers from this service were already working significantly in the community (eg, churches, houses and schools).

that patients were “not coming in so sick”. This may be partly due to increased patient supervision by the primary care team.

The manager identified that outreach nurses had a high level of awareness of wider social and economic determinants of health and refer across the range of Ora Toa services including benefit and housing advocacy. As with other Porirua Plus outreach nurses there was a degree of flexibility and goodwill demonstrated by these nurses for example working in weekends and evenings. Nurse led clinics were starting to focus on prevention with womens health, asthma and well child clinics being offered by Ora Toa.

3.3.1.3 Additional nurse services

Outreach and clinic nursing roles were intertwined and often performed by the same nurse. WIPA used funding under this contract provides for nurse-led clinics for high priority patients. The clinics were staffed by the access nurses, who triage patients with chronic conditions who were not otherwise accessing services. The clinics operate weekly and were free or had a maximum charge of five dollars. Numbers attending were initially low but had increased as the service had developed and patients and GPs had become aware of the service. PUCHS nurse-led clinics were provided free, as were follow-up visits for patients with a new diagnosis. Pacific Health used the funding to increase hours for existing nurses. Close working relationships existed between community health workers and nurses employed by Pacific Health. Ora Toa nurses rotated between clinic-based work and community outreach. Nurse visits were free and many clients were electing to have nurse consultations, resulting in a greater frequency of patient visits for those with chronic conditions. Nurses regularly followed up by phone, and both incoming and outgoing phone consultations had increased.

3.3.1.4 Extended GP hours

The funding allowed WIPA/Tumai GPs to be available for consultations arising from nurse-led clinics so that nurses could see high priority patients. Allocated hours across the GP workforce added up to eight hours per week (equivalent to 0.2 FTE). PUCHS engaged a locum GP from February to July 2003 for four sessions a week – 400 extra hours in total. These additional hours reduced waiting times for patients and eased pressure on other GPs in the service. PUCHS had now engaged another GP on a contract basis to work four days a week from 9 am to 2 pm (equivalent to 0.5 FTE). Funding under this contract enabled Ora Toa to employ an extra GP in their Cannons Creek clinic, and waive patient costs for follow-up visits and prescription-only fees. Two evening clinics were operated in Cannons Creek from PIA funding.

No GP services were provided by Maraeroa, but a small amount of funding was initially negotiated with Waitangirua Health Centre for a GP clinic to improve access for those clients from Maraeroa not able to pay for a GP consultation. This initiative was not fully implemented for a range of reasons, and Maraeroa were currently reviewing options for how best to advance low-cost access to GP services for their client base. The Waitangirua Health Centre was funded under the PHO access formula, and as such had reduced fees¹⁰. However, there was continuing concern at the cost of GP services for this community.

3.3.1.5 Health education

Health education and health promotion activities were delivered by the community health workers and outreach nurses. These activities have in some instances have been mentioned in the above sections (outreach nurses, CHWs) but are brought together here to view as a whole.

The WIPA/Tumai social worker provided individual clients, whānau and practice staff with information on how to address barriers to health care due to social need arising from housing, WINZ and benefit advocacy, and links with other health providers, especially Te Roopu Awhina and the Taeaomanino Trust.

¹⁰ Fees varied between \$20 to \$22 in this period for a normal consultation for adults.

PUCHS carried out group education and support sessions and utilised existing health education resources, such as information from the Ministry of Health, although some of this material needs further development (eg, it needs to be more visual). Some information that was culturally specific to Samoan people, such as sexual health information, had been developed by the service. The community garden provides an example of a health-enhancing activity that people in Porirua could do at low cost in their own backyard. The garden project had an emphasis on nutrition, exercise, environmental balance and working co-operatively. This developed into the Toiora programme from 2004 (described in the following section).

Most of the work done by Pacific Health was health promotion, with some basic health screening. Pacific Health was using talkback (Access Radio) with some positive results in terms of phone-ins on air and clients calling in to the health centre after hearing the radio talkback. Pacific Health runs monthly evening sessions with Tokelau, Cook Islands and Samoan community groups to deliver information on topics such as nutrition, diabetes, cardiovascular disease and immunisation. They have translated service information into seven languages, using plain everyday language that was more appropriate for Pacific peoples than that provided by the Ministry of Health. Pacific Health was also carrying out a range of other health promoting activities. Over the 2004-2005 period they have been involved in interventions with the New Zealand Food Safety Authority, New Zealand Institute of Sport, Regional Public Health, and Cancer Society.

Maraeroa was carrying out health education in the community in partnership with other health professionals, such as the pharmacist and specialist screening services, how and was utilising a range of venues for health promotion (eg, supermarkets and malls). The mothers support group had a strong emphasis on health education. The use of medical language still presented a barrier to access and much of their work involved interpreting information for patients and whanau. Translating medical language into a form readily understood by the community was still a common need.

Ora Toa Health held health education clinics providing information about asthma, nutrition, physical activity, smoking cessation and antenatal clinics. Sexual health education was provided for teenage mothers at He Huarahi Tamariki (an education provider which was located in Cannons Creek but was now in Linden). Twenty young mothers had attended these sessions.

3.3.1.6 Toiora programme

From 2004 the PUCHS garden project had been integrated into a broader programme called Toiora, a healthy eating healthy activity programme. The Toiora project was developed alongside a PHARMAC funded project to promote Cardiovascular (CV) risk assessment. PHARMAC provided \$15,000 to develop and implement marketing to the target group, provide nurse screening and GP referral/followup. The ability to work with people identified as having higher CV risk within the familiarity of established relationships had been very positive and Toiora was developed without any specific funding (other than staff time) until recently.

Leadership for the Toiora programme was provided by the PUCHS CHW in collaboration with community governance members. The community was engaged through a word of mouth approach. The programme is based on a sustainable change behaviour model, and encouraged community ownership through a governance-training programme. The programme provided work skills and training in nutrition and fitness instruction for community volunteers facilitated by effective partnerships with agencies such as Sport Wellington, Te Hotu Manawa Maori and with support from local agencies such as Recreation Porirua. As at June 2005, the programme catered for about 30 families.

3.3.1.7 Pharmaceuticals subsidy

Ora Toa had a budget for pharmaceuticals that had been used to purchase blood sugar meters for diabetic patients, many of whom did not have meters. Patients were also given advantage strips free of charge to improve their uptake of blood sugar level self-checks. The budget had also been used to subsidise

selected pharmaceuticals for one-off prescriptions such as chlamydia medication – and in some cases ongoing prescriptions – for those with an identified need.

A prescription subsidy was utilised by WIPA in the initial stages of the PIA project, with PHO development this was no longer available through the PIA funding because it was then funded through PHO funds. Maraeroa have identified financial barriers for their client group and utilise PROMED¹¹ and the prescription subsidy available through Te Roopu Awhina to assist whanau with costs of pharmaceuticals.

3.3.2 Better practice in primary care

Better practice in primary care will enhance the ability of providers to deliver services designed to improve access to primary care. Better practice in this instance includes creating greater integration between primary care services participating in this project (i.e. evidence of collective action) and between these services and other health sector services (secondary or tertiary) and non-health sector services (such as housing, income and education). The indicator of greater integration with other organisations is evidence of improved linkages¹². Better practice also includes developing the capacity of providers, primarily through workforce development. The reflection of this on shared understanding of intervention logic is also discussed here as this has potential to improve quality of practice.

3.3.2.1 Collective action

Collective action between PIA staff and other primary care staff in the participating providers was seen in a number of situations. PIA nurses across the Porirua Plus PHO work collaboratively on outreach projects, and this is particularly strong among PIA nurses from Ora Toa, Maraeroa and Pacific Health. There had been an attempt to also include a Pacific nurse from WIPA/Tumai but she had left the service and the integration was then limited to Porirua Plus.

Collective action for nursing happens also happens effectively around the Whitireia workshops. Training occurs on a monthly basis and provides an opportunity to share ideas and receive training in areas identified by participants. Integration between the PUCHS CHW and nurse was most evident in the work on the Toiora programme where the nurse carried out clinical screening such as blood pressure readings alongside the health promotion work being implemented by the community health worker.

Other opportunities for collaborative action not funded by PIA include a Māori and Pacific nursing forum every two months. Primary care nurses also network monthly at meetings facilitated by a nurse from Regional Public Health. Pacific Health spoke about a shared approach to utilisation of the Pacific nursing workforce by working collaboratively with other services eg PUCHS and Ora Toa eg providing locum cover for nurses.

WIPA and PUCHS have addressed poor rates of retinal screening uptake as a collaborative action. Letters were sent out in Samoan, and the Samoan nurse and community health worker followed up personally with patients. An excellent response resulted from this action, with 39 patients accessing retinal screening outreach and only one DNA reported.

¹¹ PROMED was funded through Proactive Outreach ICAH funding and provides vouchers on referral from providers

¹² Linkages in this context means relationships developed with key people in other organisations – these being other primary care organisations, other health sector organisations or outside of the health sector – which creates improved information sharing and opportunities for working together on joint projects. These linkages will be informal in most cases but may include signing of Memoranda of Understanding between organisations.

Some community health workers work together, particularly between PUCHS and Maraeroa and Pacific Health, where they attend training and meetings together, although the extent of this shared client approach was unclear. The PUCHS community health worker reported that community health workers from a range of services, not only primary health, meet together to share information and discuss a variety of issues, such as quality service delivery, professional representation and general issues affecting community health work. There were examples of community health workers working effectively alongside nurses and doctors; PUCHS commented that the CHW and nurse work as a team on the Toiora project (see section 3.3.1.6) likewise Maraeroa work with CHWs and nurses on the mothers support programme and Pacific Health CHW work with nurses on the evening clinics. CHW informants talked about the growing credibility with doctors in the Porirua Basin area and have evidenced this by referrals both to the GP and back to the CHW.

No examples were given in the interviewing process of collaborative action relating among GPs. However, examples were given of GPs working collaboratively with outreach nurses. PUCHS doctors were now working with the outreach nurse to service patients in their home setting and Ora Toa spoke of a team approach to patient care that involved a close working relationship between doctors and nurses, for example a doctor and access nurse provided team cover for a patient over a weekend until Hospice services could be commenced on the Monday.

3.3.2.2 Links with other services

All providers have worked to establish links relevant to their client base, both within the health sector and external to it, including:

- the health sector (pharmacists, midwifery services, Kenepuru Hospital, PHO partners, Regional Public Health, Primary Care networking group, and Promed)
- Māori and Pacific groups (Porirua Māori Providers Association, Māori and Pacific Primary Care networking group, Te Roopa Awhina and Taeaomanino Trust)
- education sector (Te Wananga o Aotearoa, Strengthening Families, Family Start, child care facilities, Whitireia Community Polytechnic)
- income sector (WINZ benefit advocacy, WINZ industry training group)
- Police, Courts and Māori Women's Refuge in Porirua
- local government sector (Porirua City Council)
- other government agencies such as Housing New Zealand Corporation, Accident Compensation Corporation, Immigration, SPARC, New Zealand Food Safety Authority, and the Inland Revenue Department
- social support agencies (eg, food banks).

All providers identified that the training accessed through Whitireia Polytechnic as part of workforce development funding under the PIA contract (described in the following section), had provided significant opportunities for making linkages between services. The training provided an opportunity for reviewing practice and exploring ways of working together.

The PATHS project¹³ was heavily influenced (and able to develop) because of input and support from the WIPA/Tumai social worker and the Maraeroa nurse and CHW. The relationship between these PIA staff and the Porirua WINZ office was characterised by joint problem solving and good working relationships. Providers, particularly CHWs and outreach nurses was critical for referral of appropriate families to insulation providers and for housing and heating study.

¹³ ¹³ The PATHS project was initiated by the Ministry for Social Development and is run in partnership with PHOs, Capital and Coast District Health Board and Work and Income. The project offers and individualised service to people who have been unable to work due to ill health. PATHS co-ordinators work with each person to bring together relevant services (health, social, employment) to aid their return to work.

WIPA

Meetings to establish links at a senior management level across services were initially well attended, but these have since been replaced by service co-ordination along PHO lines. The 2004 data noted that formalised referral processes exist with a range of specialist nurses, but that links between public health and district nurses could be improved. Interviews carried out with nurses in 2005 indicated that significant progress had been made with this goal and a more co-ordinated approach was being achieved with specialist nurses communicating more effectively and planning whanau care in a more co-ordinated fashion.

An intersectoral facilitator (a social worker) was available to provide an interface with agencies such as WINZ, Housing New Zealand Corporation, Accident Compensation Corporation, Immigration, Inland Revenue Department and Promed, with the intention of working intersectorally to improve patient outcomes. The facilitator attended advocacy meetings held monthly with a range of organisations.

The PIA project had allowed an opportunity for development of an interdisciplinary approach within the primary care team, particularly strengthened nursing roles and the role of health advocacy. However the evolution of an interdisciplinary approach that includes all key players in the primary care team was piecemeal at 2005. The PIA staff identified possible benefits from facilitated peer review sessions to improve interdisciplinary working.

PUCHS

PIA nursing staff engaged with two existing nurse liaison groups: one for Māori or Pacific nurses and another for primary care nurses. The CHWs had also formed a strong liaison group. PUCHS identified that communication with Pacific Health had improved, particularly regarding patient outcomes and co-ordination of follow-up between services. The CHW through the Toiora programme had utilised linkages (SPARC, Sport Wellington, Te Hotu Manawa Maori, and Recreation Porirua) to facilitate access to resources and training for community volunteers.

Pacific Health

Pacific Health nurses attend monthly meetings of the Māori and Pacific primary care networking group and the general primary care nurses group. Networking meetings were attended by a range of providers that represent intersectoral interests, such as social support agencies, Housing New Zealand Corporation, WINZ and Accident Compensation Corporation. The manager reported that the service had a good relationship with Porirua Health Plus GPs. Their clients were spread across the range of GPs. Pacific Health also worked in partnership with Regional Public Health to increase cervical screening.

The manager of Pacific Health use extensive networks to implement a number of interventions aimed at not only improving wellbeing for Pacific communities and increasing service capacity in general. For example she had worked with the New Zealand Authority for Food Safety, Porirua City Council, Capital and Coast DHB, the local member of parliament, New Zealand Institute of Sport, and the Salvation Army and other churches to develop fitness programmes, food safety programmes, immunisation outreach programmes, cancer screening programmes, and building programmes.

Maraeroa

The baseline report indicated that Maraeroa had good networks and good active engagement with the Police, WINZ, the Courts, Porirua City Council, Porirua Māori Providers Association and PHO partners. Links with the local pharmacy were excellent: the pharmacist informs Maraeroa when clients fail to pick up prescriptions. In 2005 this collaborative approach had strengthened for Maraeroa and the number of agencies this group worked with had broadened out to include mental health services, Strengthening Families, social workers in the hospital, doctors from across both PHOs, access nurses, Capital Support and community police.

Ora Toa

Links have been made with Kenepuru Hospital for reviewing transport issues and after-hours services, and strengthening co-ordination between primary and secondary services. In addition, links between midwifery services and Ora Toa Clinic were being reviewed to ensure that all women and babies were accessing their six-weekly check. Ora Toa had established effective links with several pharmacists, and some prescriptions were delivered directly to the clinic, improving the likelihood of uptake. A relationship had been formed with the WINZ industry training group, in which a nurse goes into training sessions and gives information about health issues that have an impact on employment (eg, cannabis use).

Some community organisations had requested primary care services, and these had been responded to by the PIA staff. Examples include:

- services to offenders held in police holding cells between 8.30 am and 5 pm
- health assessments for students and staff at Te Wananga o Aotearoa
- WINZ health screening assessments for 70 individuals seeking employment with Canterbury Meat Packers
- nursing assessments at childcare facilities in Elsdon.

Nurses identified that many parents with children in child-care facilities locally were unable to take leave from work to care for sick children. These children were sometimes presenting at crèche with high temperatures, skin conditions, respiratory problems and discharging ears. Nurses gave anecdotal evidence of children presenting at primary care services earlier as a result of the nursing assessments in the childcare facilities.

3.3.2.3 Workforce development

All providers accessed training funded by the PIA project and delivered by Whitireia Community Polytechnic. A group called the Porirua Health Care Network was set up by the providers involved in PIA project with the purpose of identifying topics and planning the delivery of seminars¹⁴. This group met monthly to plan seminars and was attended by: PUCHS, Maraeroa, Ora Toa, Pacific Health, and WIPA (the providers); and Capital and Coast DHB, Whitireia Polytechnic, Healthlinks (Holloway 2004a).

Nursing competencies of particular relevance for outreach work are relationship management and cultural safety skills, plus a high level of self awareness. Outreach nurses may also need specialist skills depending on their area of work e.g. diabetes or asthma (Kathy Holloway, personal communication, 11/10/2005). There are no specialist qualifications.

The seminars offered by post-registration rather than post-graduate in the sense that they were not supported by an academic framework. Certificates of attendance were provided for participants which could be put towards a nursing portfolio to meet requirements for ongoing training needed to retain a practicing certificate¹⁵. They were complementary to the post-graduate programme¹⁶ and had acted as a gateway to post-graduate studies on occasion. Undergraduate students also benefited indirectly from relationships made through the network, assisting the process of finding work placements for student nurses. They provided a valuable connection between Whitireia and the nursing community, allowing them to work in partnership to minimise the theory/practice disconnection¹⁷.

¹⁴ The Porirua Healthcare Network has its own logo and has produced a couple of newsletters.

¹⁵ Nurses are required to attend 60 hours of training over a 3 year period to retain their practicing certificate.

¹⁶ Whitireia run a postgraduate programme resulting in a Postgraduate Certificate in Primary Health Care which is delivered in partnership with the Royal Plunket Society. This is a full year programme including both theory and practical components. The programme has four strands: Well-Child Tamariki Ora; Disease State Management (District Nurse); Population and Personal Health (Public Health Nurse); and Family Practice (Practice Nurse). All of these strands emphasise the importance of working alongside people in the community, a set of skills and beliefs which is particularly relevant for outreach nurses.

¹⁷ Partnership with the community is a strongly held philosophy of the Whitireia Community Polytechnic.

The seminars were interdisciplinary and open to anyone working in primary care. They were attended mostly by registered nurses but also include pharmacists, physiotherapists, community health workers, optometrists and general practitioners. Seminar topics are shown in table 5.

Table 5: Whitireia workshops: topics and attendance

Month Year	Topic	Number attended
October 2003	Asthma Management Plans in the Community	29
November 2003	Annual Reviews for Diabetes Management	24
February 2004	Barriers to Cardiac Care for Maori and Pacific People	38
April 2004	Improving Access Workers and Initiatives in Porirua.	25
June 2004	Mental Health in Primary Care	22
August 2004	Teamwork in Primary Care [Part One of Two]	16
October 2004	MenzB project * how will we do it?	13
March 2005	Quality improvement in primary health care – what is happening here?	28
May 2005	Staying mentally healthy	15
July 2005	Overview of Mary Potter Hospice Palliative Care Services	8

Source: Holloway 2004a, 2004b, 2005

Each seminar was evaluated by the Whitireia in terms of seminar content, usefulness of handouts and what participants recommendations to others would be. On average about two thirds of participants rated the seminar contents as very useful and would recommend them to others as such (Holloway 2004a, 2004b, 2005). The seminars had become a valuable and well known part of the landscape among the nursing community in Porirua, and a valuable compliment to pre-existing undergrad and postgrad programmes at Whitireia.

3.3.2.4 Intervention logic

At the time of baseline data collection there was no clear and shared understanding of intervention logic. However by June 2005 all providers were able to describe clear intervention logic for the range of interventions being implemented. They could be clustered into a number of broad approaches; culturally safe practice, a wider health determinants approach, evidence and needs based, behaviour change models, a Te Tiriti o Waitangi framework including reducing inequalities, holism, and community development.

Participants described a number of specific frameworks such as Te Whare Tapa Wha, and “the five ways” for Pacific; acknowledging the diversity of Pacific populations. Most had described principles such as community engagement and collaboration and empowerment as being key principles in the approach. Some spoke about doing things differently to achieve change, including new nursing models and collaborative interventions with community partners. All participants acknowledged the wider determinants of health and the need to address these if health outcomes were to be met. Others spoke about social justice issues and the need to address inequalities, in particular meeting the needs of their community.

3.4 Outcomes

3.4.1 Intermediate outcomes

As outlined in the methodology section, an input-outcome conceptual model was used to guide the selection of intermediate outcomes. Intermediate variables were chosen on the basis that they directly affect health status and can also be influenced by primary care interventions. The intermediate variables were selected to have some or most of the following characteristics:

- they are both behavioural and biological
- they have a particular focus of effect on a biological risk factor
- they exert a direct effect on the factor in question
- they are susceptible to primary care interventions (an item of priority in primary care programmes).

A description of the input-outcome conceptual model was provided in the section on evaluation methodology (see Figure 1). Table 8 in Appendix 2 summarises the baseline data that have been collected. All intermediate outcomes data were sourced from Capital and Coast DHB via quarterly monitoring returns as part of contract obligations.

Because other primary care initiatives, such as the development of primary health organisations (PHOs), have also affected primary care utilisation rates and ambulatory-sensitive hospitalisations, not all changes documented below can be attributed to the PIA projects. This analysis looks at primary care improvements overall.

3.4.1.1 GP and nurse utilisation

GP and nurse utilisation data were obtained by C&CDHB from Tumai and Porirua Health Plus for the time period 1 April 2003 through to 30 June 2005. Following the establishment of PHOs in April 2003, C&CDHB started to consolidate data collection according to Ministry of Health business rules for PHO reporting and performance monitoring (aimed at ensuring consistency of data collection across the sector and streamlining reporting requirements for primary care providers)¹⁸. As a result, some indicators reported here were not directly comparable pre- and post-April 2003.

The following points should be taken into account when interpreting the data reported here:

- Utilisation rates were not age standardised.
- Service utilisation rates were for clinic-based GPs and practice nurses only.
- Consultation data for the period 1 April 2003 - 30 September 2004 were extracted based on ICAH’s requirements while the subsequent data extracts from 1 April 2004 were based on PHO business rules.

As a result of changes in data extraction over the duration of the evaluation, there were some data inconsistencies as follows.

- The earlier utilisation data extracts excluded immunisation and maternity related visits.

¹⁸ The business rules are consistent with PHO requirements in that all casual consultations are excluded.

- PHO utilisation data included immunisation and maternity visits. This was due to the developmental nature of PHO service utilisation data extracts in relation to practice management system (PMS) vendors' readiness to fulfil Ministry of Health specifications.

A more consistent approach for these analyses would have been to deduct immunisation and maternity related utilisation from PHO utilisation data. However, it was not possible for C&CDHB to do this within the time frame for this report. PHO utilisation data allow for double counting of consultations where the visit involved more than one distinct service (eg general medical services and immunisation in one single visit). The earlier data prior to April 2003 did not allow for multiple consultations within a single visit.

The effect of MeNZB campaign had been taken into account in the results presented here (ie data have been adjusted to discount the temporary effect of the MeNZB campaign (9 May - 31 December 2005) which resulted in increased utilisation for immunisation from the April to June 2005 quarter). Due to differences in the data supplied by providers, a consistent but slightly less accurate method was used to discount the MeNZB-related visits for the April - June 2005 quarter. Utilisation for this quarter was discounted by applying the percentage of non-MeNZB related utilisation to the total utilisation counts. The percentages were 94% for Porirua Plus practices and 87% for Tumai practices.

Figure 3 shows the combined utilisation rates for GPs and practice nurses. The most notable aspect highlighted by the chart was the marked increase in total utilisation in the fourth quarter (commencing 1/4/2004) in six of the practices with Improving Access funding (the Ora Toa practices, PUCHS, Waitangirua and Dr Gaus). Utilisation rates in practices not receiving this funding stream were relatively stable by comparison, and in the latter quarters were lower than the rates in the Ora Toa practices, PUCHS and Dr Gaus. Figure 4 demonstrates an increase in utilisation in the April 2005 quarter consistent with the roll-out of the MeNZB campaign.

The utilisation differences between practices may partly reflect the greater propensity for the Health Care Aotearoa-affiliated practices (such as Ora Toa and PUCHS) to make use of and record nurse consultations than was the case in traditional practices (such as Dr Gaus). The propensity to use and record nurse consultations is in turn driven in part by the greater reliance on capitation funding mechanisms in the former group of practices and in part by an organisational commitment to make greater use of nurses. It seems likely, judging from the data, that there were utilisation data capture problems during the first three quarters in the Waitangirua and Dr Gaus practices. For these reasons comparisons of utilisation within a practice over time may be more reliable than are comparisons between different types of practice. The level of utilisation and the increase in utilisation over time are more marked in the Health Care Aotearoa practices than the non-Health Care Aotearoa practices (regardless of Access or Interim status). This may reflect organisational culture more than it does the Access/Interim distinction. These comments and qualifications apply also to the following observations on utilisation by ethnic group.

When analysed by ethnic group, a difference was apparent in the utilisation rates for Māori and Pacific between Ora Toa practices and PUCHS (which received Improving Access funding) and practices which were not receiving Improving Access funding (Figure 5); in the former practices rates (in the later quarters) were generally greater than 0.8 visits per quarter per capita, and in the latter practices they were generally less than 0.6 visits per capita per quarter. In the Ora Toa practices and PUCHS, utilisation rates for the Other ethnic group were higher than the rates for Māori and Pacific (Figures 5 and 6). In the Ora Toa practices and PUCHS rates for the Other ethnic group were higher than they were in practices not receiving Improving Access funding (Figure 6). There was a suggestion of a downward trend in utilisation for both the Maori and Pacific group and the Other group in some of the non-PIA practices (Figure 6).

The pattern for NZDep quintile five (Figure 7) was intermediate between that of the Maori and Pacific group (Figure 5) and that of the Other ethnic group (Figure 6).

In interpreting all of the above data, it is important to note that ICAH funding related to primary care access commenced in November 2002, and capitation funding to Access-funded PHOs commenced on April 1 2003. Therefore, as of April 2003, both funding streams were in effect, and it becomes very hard to make judgements about the independent effects of either funding stream.

Figure 3: Quarterly total utilisation rates (GP, nurse), by practice – excluding MenZB consults

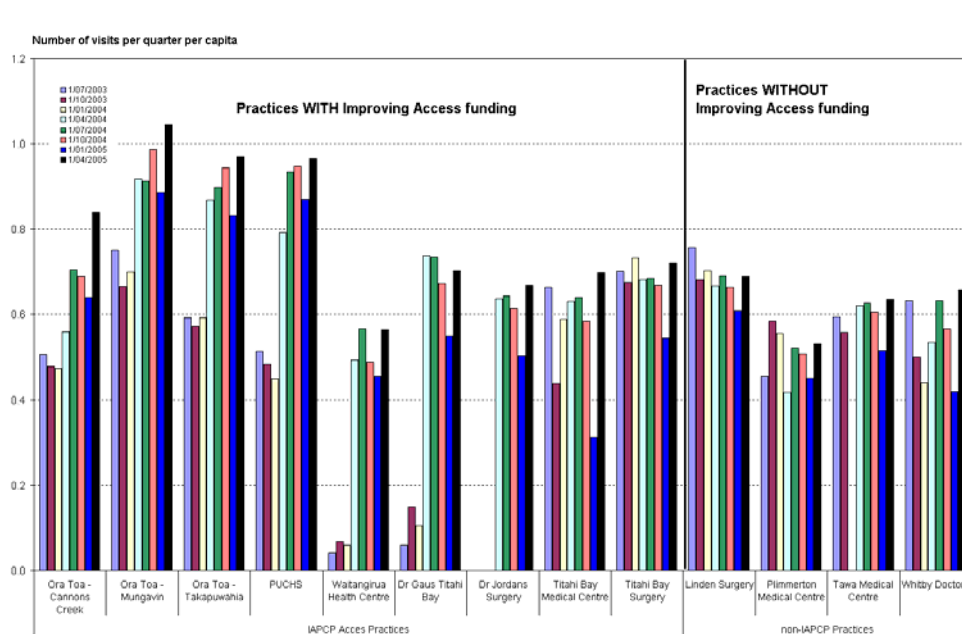


Figure 4: Quarterly total utilisation rates (GP, nurse), by practice - including MenZB consults

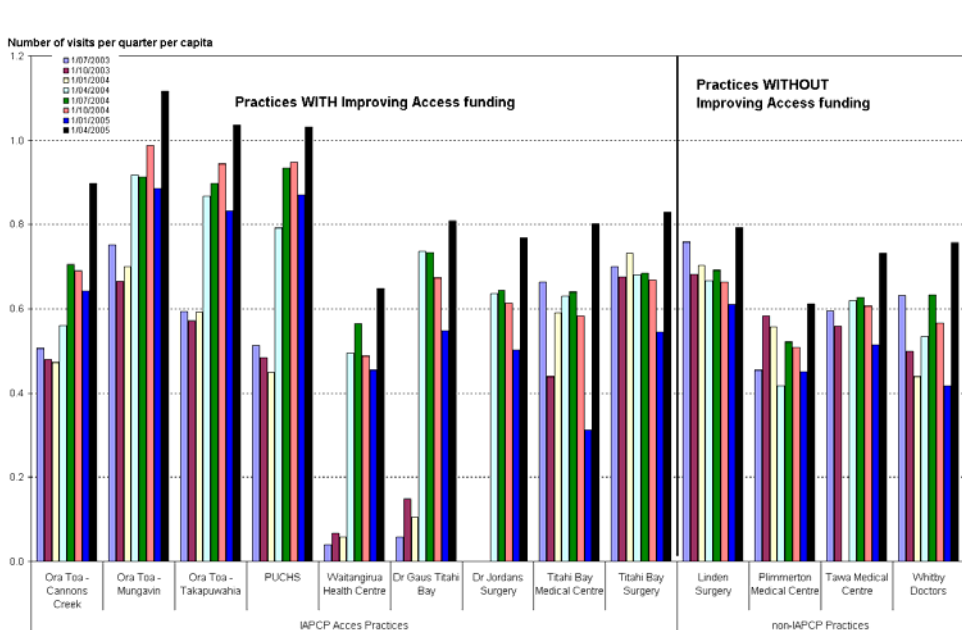
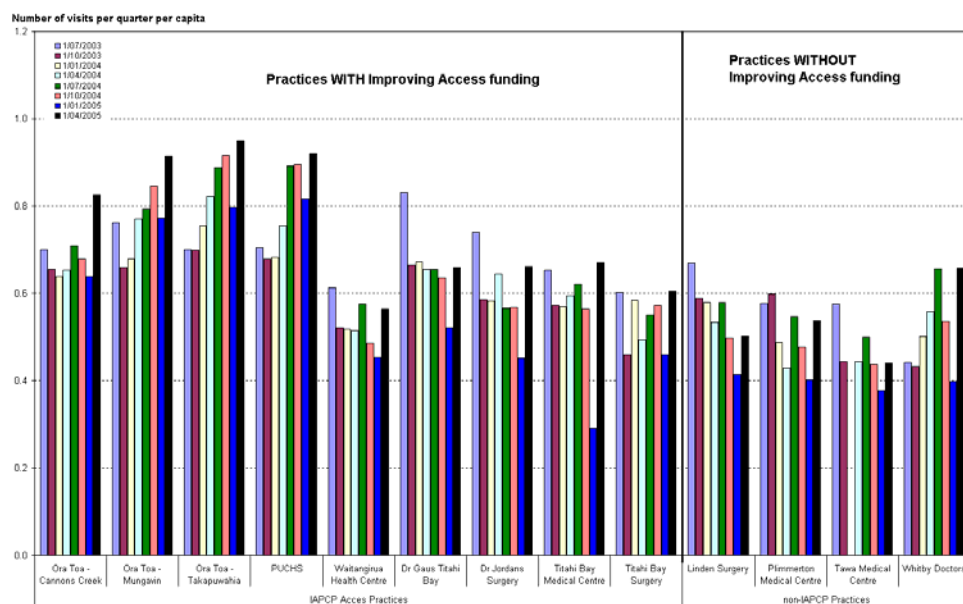
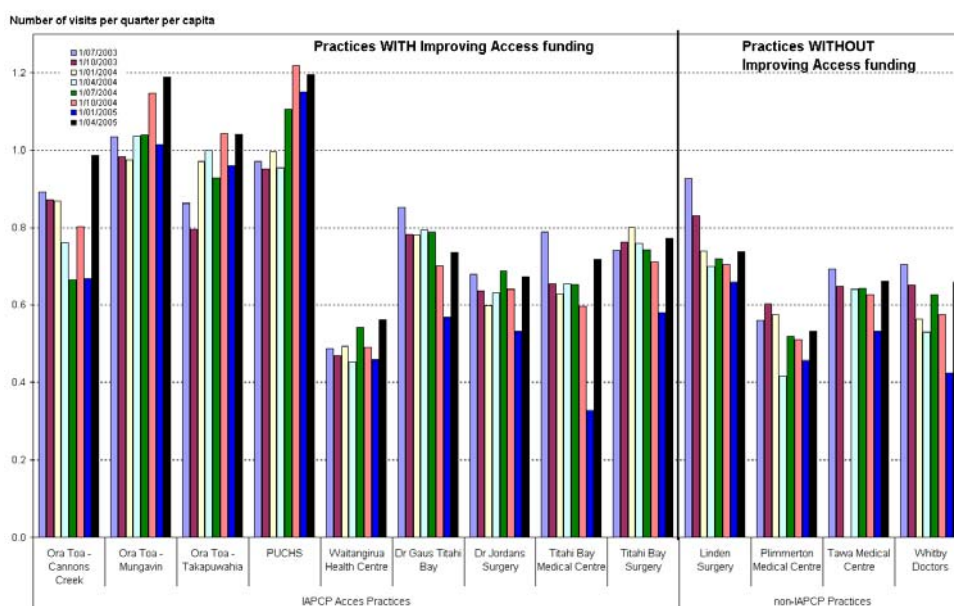


Figure 5: Quarterly total utilisation rates (GP, nurse), by practice – Māori and Pacific



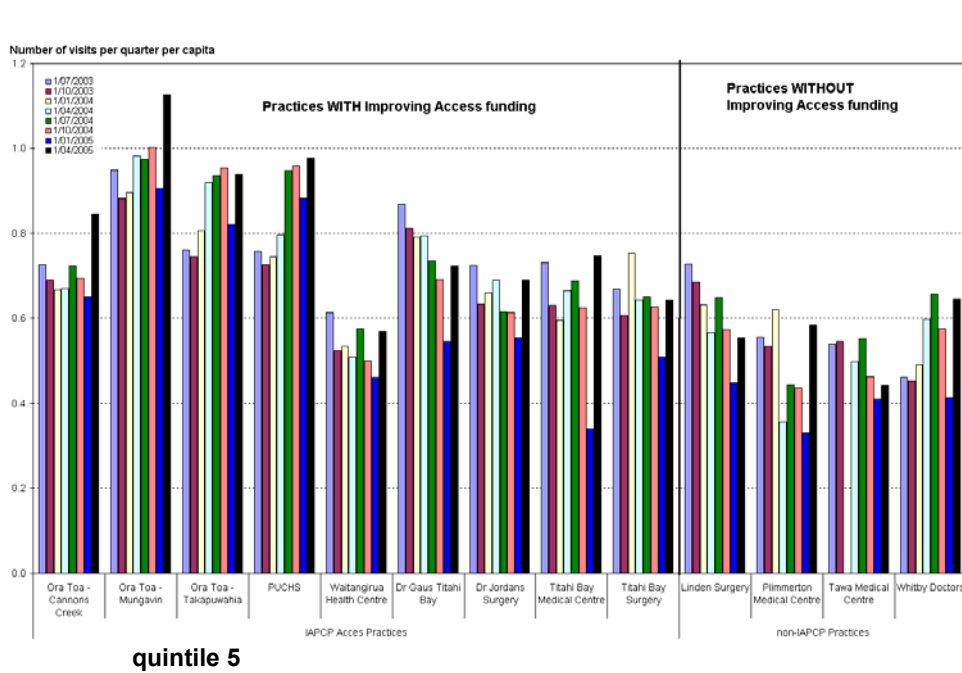
*Excluding MenZB consultations *

Figure 6: Quarterly total utilisation rates (GP, nurse), by practice – Other ethnic group



* This group includes all non-Māori and non-Pacific people; excluding MenZB consultations*

Figure 7: Quarterly total utilisation rates (GP, nurse) by quarter, by practice – NZDep

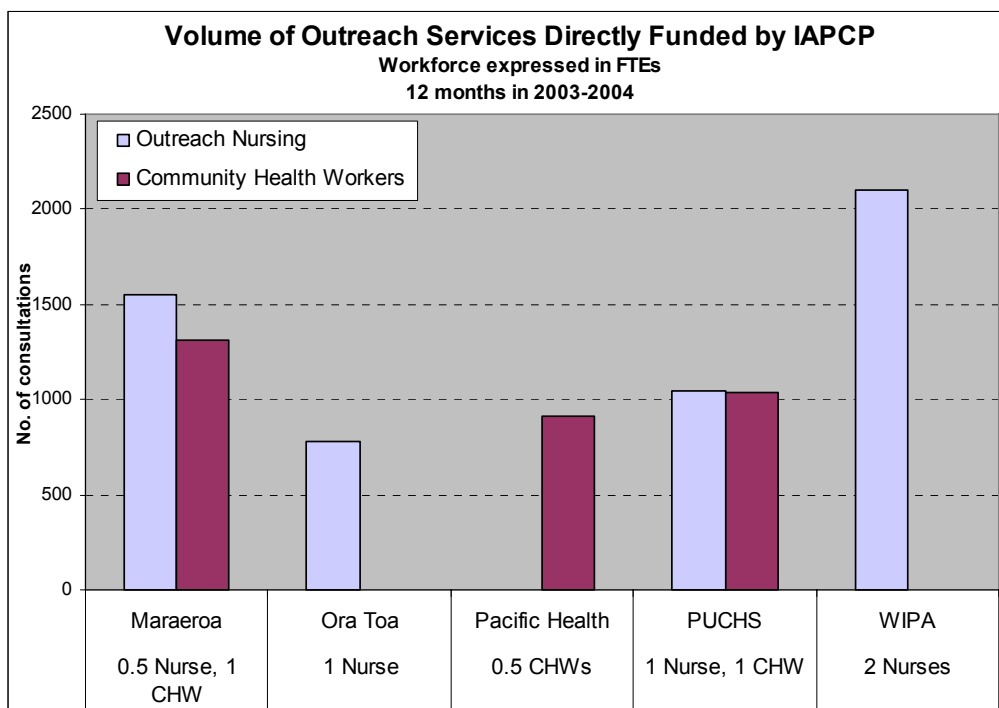


*Excluding MeNZB consultations

3.4.1.2 CHW and outreach nurse utilisation

Data for the outreach services for the 12 month period July 2003 – June 2004 are shown in Figure 8. More recent updates were not available from C&CDHB within the time frame for this report. The data in Figure 8 provide a baseline for monitoring trends in the future. WIPA provided the highest volume of outreach nursing services during this 12 month period (somewhat over 2000 visits). The two nurses at Ora Toa have mainly provided triage role in the clinic setting, including many telephone follow-up consultations that were not recorded until recently. These two nurses together contributed about 1 FTE of their time to actual community outreach activities.

Figure 8: Volume of outreach services directly funded by PIA (12 months in 2003-2004)



*Workforce expressed in FTEs

3.4.1.3 Breast screening

Table 6 was based on data supplied by Regional Public Health for the period July 2001 – June 2003; more recent data were not available in time for this report. C&C DHB had been working with the National Screening Unit to obtain PHO/practice level coverage figures, results of which are included in Figure 9. However, it was not possible to project this analysis backwards to cover the earlier years of PIA (prior to April 2003).

Comment: Check table number in first report

When interpreting the breast-screening information, it is important to take the following factors into account. Only WIPA practices (ie Tumai) were included in the Breastscreen Aotearoa (BSA) GP Funding Pilot, which concluded on June 30th 2005. GPs from these practices were provided with funding and enhanced processes to enable them to offer eligible women from their respective medical practices the opportunity to participate in the BSA Programme. Coverage rates were also dependent on the schedule of the mobile screening unit for a particular location (which started in Porirua in September – December 2005). It should be noted that some women received breast screening in private clinics and may not have had their screening data recorded.

Table 6 shows the numbers and rates for women screened for breast cancer over the period July 2001 to June 2003. Apart from providing baseline data, this table clearly demonstrates low overall screening rates for all ethnic groups, and particularly low rates for Pacific women.

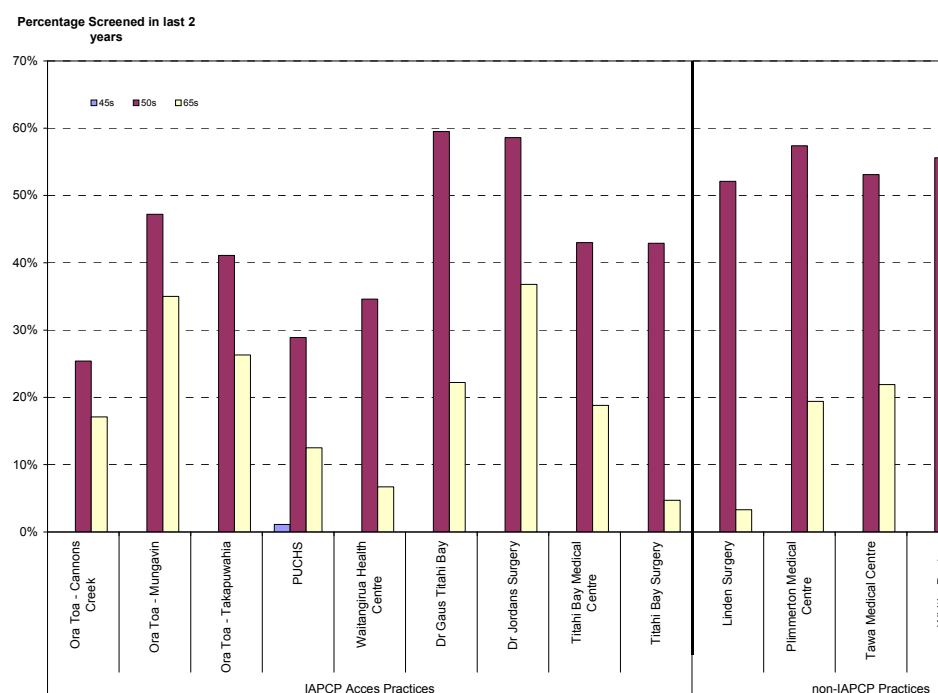
The results shown in Figure 9 do not control for ethnicity and deprivation. The generally higher rates of breast screening in the non-PIA practices were likely to reflect the higher proportions of non-poor, non-Maori and non-Pacific women enrolled in these practices.

Table 6: Women screened in Capital and Coast DHB area, July 2001 to June 2003

Months	Porirua/Kapiti			Wellington		
	Māori	Pacific	Other	Māori	Pacific	Other
July 2001	15	1	297	6	3	279
August 2001	20	3	395	10	3	259
September 2001	27	6	399	5	1	254
October 2001	17	6	437	7	8	278
November 2001	25	14	231	12	3	374
December 2001	20	14	107	6	5	167
January 2002	23	20	207	23	3	270
February 2002	14	12	134	22	8	380
March 2002	4	2	86	8	4	218
April 2002	2	0	53	9	3	191
May 2002	3	0	79	4	5	290
June 2002	2	0	56	8	1	215
July 2002	6	4	90	12	4	247
August 2002	53	60	191	15	8	302
September 2002	5	2	53	12	17	357
November 2002	1	2	54	8	14	386
December 2002	5	2	52	2	0	86
January 2003	7	3	58	4	1	131
February 2003	7	2	106	10	5	319
March 2003	4	2	100	6	0	379
April 2003	8	4	250	11	2	209
May 2003	15	4	365	8	0	200
June 2003	21	0	376	3	3	231
Totals	132	85	1695	91	54	2847
Population*	516	582	5571	438	384	10371
Target	35%	35%	35%	35%	35%	35%
Screening rate 2001/02	33%	13%	45%	27%	12%	31%
Screening rate 2002/03	26%	15%	30%	21%	14%	27%

* Volumes in each area can fluctuate due to the two-yearly mobile screening cycle. Population based on 2001 census, women aged 50–64 years.

Figure 9: Breast screening coverage by practice, April 2003 - June 2005



3.4.1.4 Diabetes

Diabetes annual check data is an indicator of attempts to track people with diabetes who have had their diabetes identified and have received an annual check. There may be people with diabetes detected who have not had an annual check hence the 'annual check' data have some limitations. The predicted number for the District or for a PHO was based on a model, developed by the Ministry of Health in 2002, that used national disease prevalence data. This report focused on Type 2 Diabetes since this was mainly monitored and managed at a primary care level.

Diabetes 'case management' was the terminology used nationally to describe the level of poor diabetes control. An HbA1c greater than 8% reflects relatively poor diabetes control, requiring active 'case management'. In this analysis, we have chosen to report relatively good blood sugar control (HbA1c less than 8%) as it reflects the outcomes that C&CDHB was aiming for. The results for 'control' are affected by new diabetics being identified and joining the programme. The percentages of 'control' and retinal screening were calculated using the number of annual reviews as the denominator.

Figure 10 shows the number of people with diabetes in each PHO who received an annual check, expressed as a percentage of the predicted number of people with diabetes. The relatively high percentage overall reflects a high rate of identification against the model. Overall case detection was lowest for Maori (Figure 10). These Porirua data compare favourably with national figures from 2004 derived from the national 'Get Checked Programme', where 36.9% of Māori and 65.5% of non-Māori had access to the Programme. These percentages are calculated as proportions of people estimated to have diagnosed diabetes (Ministry of Health 2006b).

Overall diabetes control (HbA1c < 8%) was poorest in the Pacific group (Figure 11). The Porirua diabetes control data are comparable with national figures from 2004 derived from the national 'Get Checked Programme', where 59.7% of Māori and 73.2% of non-Māori had HbA1c < 8% (Ministry of Health 2006b)

Retinal screening rates were similar in all ethnic groups (Figure 12).

Figure 10: Type 2 diabetes case detection - annual reviews completed vs MoH diabetes prediction

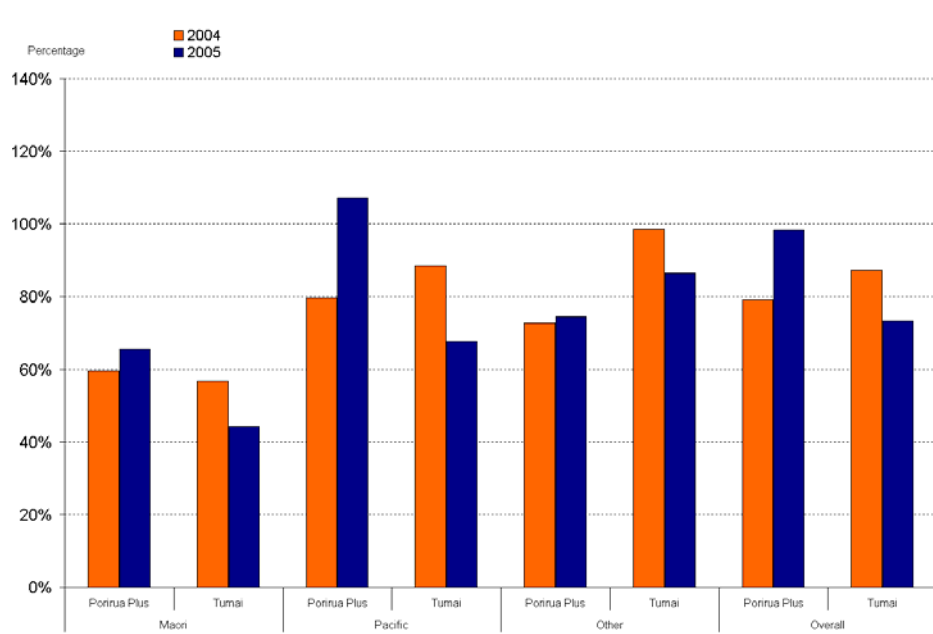


Figure 11: Diabetes control by ethnicity

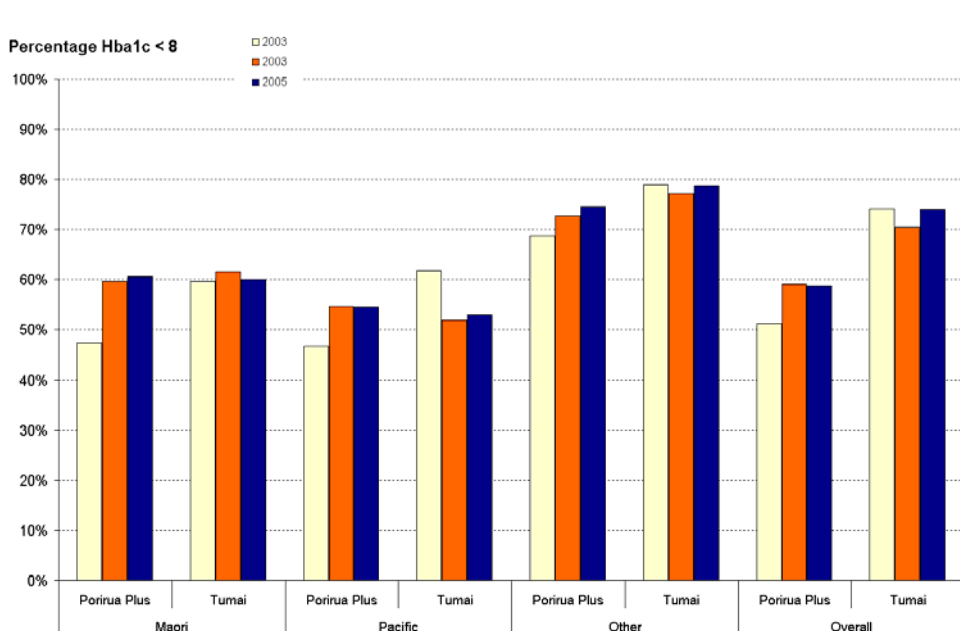
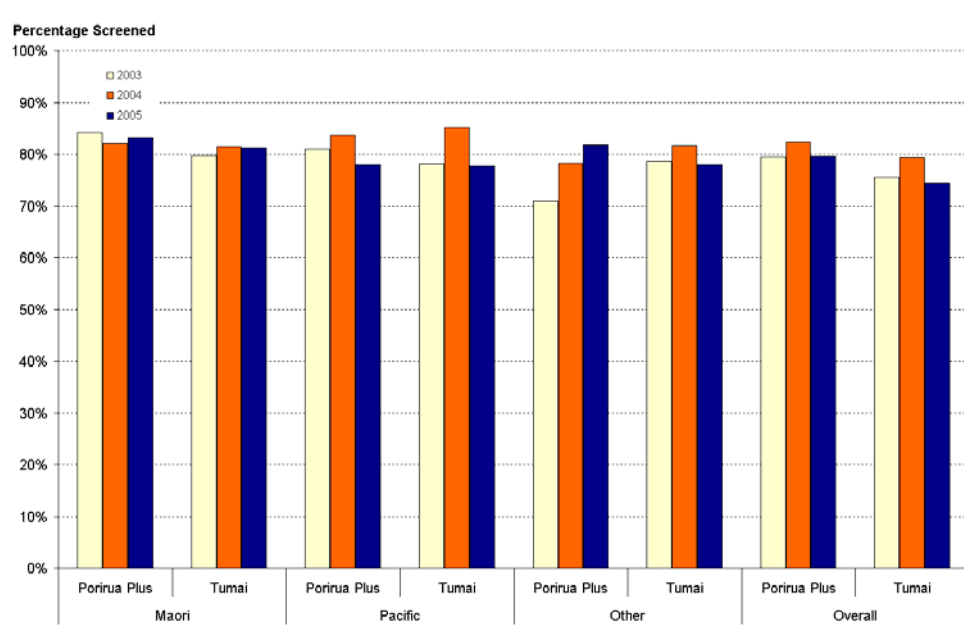


Figure 12: Diabetes retinal screening



5.4.1.5 Emergency department utilisation

After hours utilisation data were not available because data were collected at the After Hours Medical Centre, which was not a participant of the PIA project. Furthermore, the practice management system used by the After Hours Medical Centre was a non-standard GMS claiming/payment system that did not allow data extraction in the format required by the ICAH evaluation. This clinic was closed from 1 July 2005 and after-hours services were moved to Kenepuru Accident and Medical Centre at Kenepuru hospital.

Data presented in Table 7 are based on attendances at both Kenepuru and Wellington hospitals. Overall emergency department (ED) utilisation rates increased between 2004 and 2005 for Maori, non-Maori non-Pacific and the under fives, but remained relatively stable for Pacific. Rates were consistently higher for males than for females (Table 13).

Table 7: ED presentations: age standardised rates per 1000 PHO enrollees (95% CI)

Fiscal Year	2004 1Jul2003 - 30Jun2004	2004 1Jul2003 - 30Jun2004	2005 1Jul2004 - 30Jun2005	2005 1Jul2004 - 30Jun2005
	Tumai	Porirua Plus	Tumai	Porirua Plus
Maori	203 (193 - 213)	201 (186 - 215)	221 (209 - 234)	227 (211 - 243)
Pacific	172 (161 - 183)	156 (145 - 166)	174 (162 - 185)	174 (164 - 184)
Non-Maori Non-Pacific	134 (130 - 137)	217 (201 - 233)	146 (142 - 150)	260 (244 - 277)
0-05	138 (128 - 148)	162 (144 - 181)	150 (139 - 160)	207 (187 - 227)
6-17	124 (117 - 130)	115 (104 - 125)	140 (133 - 147)	136 (124 - 147)
18-24	147 (136 - 157)	155 (137 - 173)	168 (156 - 179)	182 (162 - 201)
25-44	109 (104 - 115)	144 (132 - 155)	119 (113 - 125)	172 (160 - 185)
45-64	122 (115 - 128)	185 (169 - 201)	130 (123 - 136)	214 (197 - 231)
65	305 (291 - 319)	391 (351 - 431)	318 (304 - 331)	417 (384 - 450)
Male	153 (148 - 158)	191 (180 - 202)	166 (161 - 171)	224 (212 - 235)
Female	136 (131 - 140)	172 (162 - 182)	147 (142 - 151)	193 (183 - 203)
Under 5	129 (125 - 132)	184 (168 - 200)	144 (140 - 148)	192 (177 - 207)
5	206 (196 - 217)	180 (171 - 188)	203 (195 - 211)	213 (205 - 222)
Total	144 (141 - 147)	180 (172 - 188)	156 (153 - 160)	208 (201 - 215)

3.4.2 Health outcomes

For Porirua, ambulatory sensitive hospitalisations increased between 1994/95 and 2004/05 (Figure 13). There were much higher rates of ambulatory sensitive hospitalisation for people living in the most deprived areas compared with those living in the least deprived areas (Figure 14), and for Maori and Pacific Island people compared with non-Maori and non-Pacific people (Figure 15). These findings suggest that: 1) Maori and Pacific people, and people living in socioeconomically deprived areas have greater need for hospitalisation than those living in less deprived areas; 2) at a local level, the public hospital system responds, at least in part, to the higher level of need amongst people living in socioeconomically deprived areas; and, 3) primary care services face considerable challenges in reducing inequities in access to services, and in service provision, that result in a pronounced socioeconomic gradient in ambulatory sensitive hospitalisations.

The trends demonstrated in Porirua mirror to some extent national trends in age standardised ambulatory sensitive hospitalisation rates. Nationally there was a trend for increasing rates between 1988/89 and 1995/96, following which rates stabilised. In Porirua the same increase in rates was observed up until

1998/99, following which rates stabilised (Ministry of Health 2005). The very large discrepancy between Māori/Pacific and non-Māori/Pacific rates observed in Porirua is also mirrored in national data.

In interpreting these findings, especially trend data, account must be taken of 1) the vulnerability of hospitalisation rates to random fluctuation that is often associated with relatively rare events, and 2) the fact that census-derived denominators have not been adjusted to take account of population changes in inter-censal periods. In respect of the first of these two problems, hospitalisation rates might be expected to fluctuate from year to year due to statistical instability, as had been clearly demonstrated empirically (Giuffrida et al., 1999). In respect of the second of the two problems, assuming that in general there had been population growth in Porirua, then hospitalisation rates would tend to have been over-estimated in intercensal years.

More generally, it is important that primary and secondary care characteristics (such as proximity of hospital beds) are taken into account when admission rates are compared over time. While such characteristics may be largely outside the control of primary care organisations they may have an important influence on hospital admission rates. These factors effectively confound the relationship between primary care inputs and admission rates. For example, it had been demonstrated that at the electoral ward level in the UK hospital mortality is significantly associated with the ratios of doctors to head of population (Jarman et al., 1999); and a high proportion of the variance in age and sex standardised admission rates can be explained by socioeconomic and secondary care factors (in the region of 30%-50% of variance) (Giuffrida et al., 1999; Jarman et al., 1999).

Figure 13: Ambulatory-sensitive hospitalisations for Porirua City (0–74 years), 1994/95–2004/05

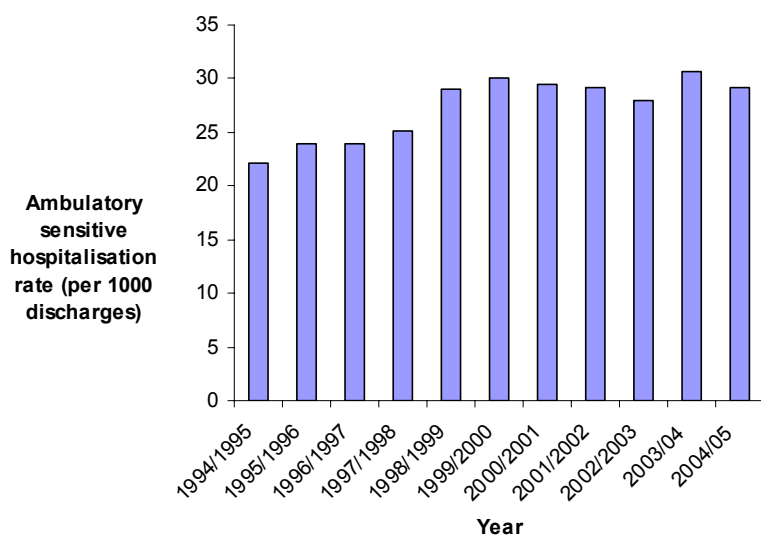


Figure 14: Ambulatory-sensitive hospitalisations (0–74 years), by NZDep groups, 1994/95–2004/05.

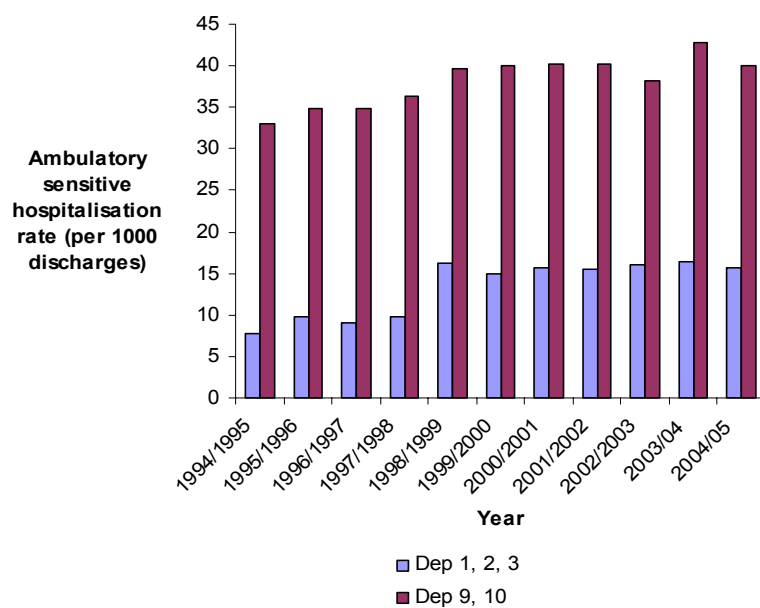
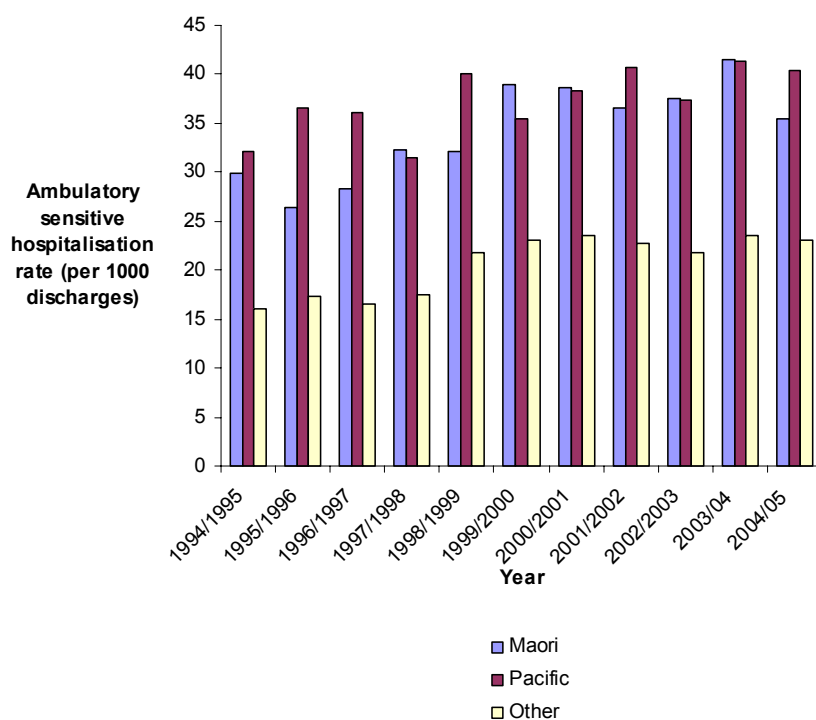


Figure 15: Ambulatory-sensitive hospitalisations (0–74 years), by ethnic group, 1994/95–2004/05



4. PORIRUA HEALTH INFORMATION COMMUNITY SERVICE (PHICS)

4.1 Context

PHICS was funded as part of the PIA project with the aim of providing information on health and disability services, and supporting information sharing and links within other services. The need for health information was identified by Healthlinks (Porirua Kapiti Healthlinks Project 2000b) and was reinforced through subsequent community consultation done by them.

The community and primary care contexts are the same as described in the PIA section of this report. The PHICS project was managed by Porirua Healthlinks Trust (PHLT)^{19,20}. PHLT developed over a period of significant change for the health sector. A complex and demanding community context made development and implementation difficult, especially effective engagement of community partners, although PHLT's effectiveness in carrying out a 'facilitation' or 'brokerage' role within the community had been highlighted as a key achievement in the main ICAH evaluation.

4.2 Service development

A total of \$444,444 was allocated to PHICS in the 2002/03 financial year. Healthlinks took responsibility for finalising the plan for PHICS, establishing the provider representative and community governance group, and recruiting a project co-ordinator to plan and oversee its establishment. An interim working party was set up to advise on the PHICS project. Healthlinks was able to mobilise various provider groups and community representatives within Porirua to gain a broad view on what was needed from a community perspective. Participants included tangata whenua, other local Māori, Pacific peoples, new settlers, social service providers, health providers, Citizens Advice Bureau, WIPA, Capital and Coast DHB, and Porirua City Council.

A project co-ordinator was appointed for a three-month period in August 2002, and the PHICS Report and Plan was produced in December 2002. This document formed a proposal to Capital and Coast DHB for the establishment of PHICS, describing the preferred model of service delivery and including an establishment plan. The model was a multi-faceted approach that interfaces closely with existing services, networks and infrastructures.²¹ The system was designed to operate from a community location.

The PHICS project was aimed at contributing to improved health outcomes for those high-need consumers involved in these projects by providing information to support access to primary healthcare services. PHICS was to provide access to electronic and hard copy information and be accessible 24 hours a day, seven days a week by phone and website. The issue of access to information by people with no phone or transport was considered in the PHICS plan. A range of options were discussed for the dissemination of information.

¹⁹ The service agreement contract between PHLT and the Ministry of Health requires PHLT to deliver strategic and annual plans, provide project governance, take intersectoral action to improve health and disability outcomes, and monitor progress against strategic and annual plans. In total 3.9 full-time equivalent staff were employed to carry out receptionist, administration, management, communication and co-ordination roles for the Trust. These staff provided management capacity for PHICS.

²⁰ Healthlinks have a key objective of achieving better access which is focused on improving the flow of health information, achieving better access to primary care services by those people with the greatest need, and achieving better access to services at Keneperu Hospital.

²¹ The model is similar to that used by the Pathways project in Hamilton.

In March 2004 the website was not operational and there had been delays in implementing the current business plan. Obvious tensions existed between the manager and some members of the advisory group. This compounded existing delays; for instance, the advisory group would not accept parts of the action plan put together by the manager in early 2004, and additional work was needed to meet governance requirements. In 2005 the funder identified that intensive management by the Porirua Healthlinks Governance Board and Capital and Coast DHB had resulted in the launch of the project in October 2004.

The PHICS advisory group²² provided valuable guidance during project development and as part of ongoing assessment of progress. As a result, lessons learned from the early stages of PHICS have been integrated into plans for the future, specifically returning to the original vision of PHICS as community owned and present in the community. PHLT were facilitating discussions with a number of community groups to get feedback on how information could be better provided in the community, and were intending to send out “foot soldiers” to talk to people in the community about their knowledge and experience of PHICS.

4.3 Inputs

The Porirua Health Information *Community* Service (PHICS), launched in October 2004, included a website and an 0800 helpline²³. These provided a ‘physical presence’ for PHICS in the community. A project manager was employed at this time. His tasks were: to keep the website updated and looking ‘right’ for Porirua; to decide how to manage calls received by the helpline; and to look at how to ensure mobility of the information (how and where it could be provided in a community setting). When the project manager resigned in April 2005 PHICS was fully operational and the main ongoing tasks were maintenance of the website and receiving calls from the helpline. These tasks fell to PHLT staff.

The manager of PHLT identified strengths of the PHICS initiative in terms of the context and the concept. The contextual strengths included the parallel process of PHO development and strengthening of community consultation which supported information sharing activities in general. PHLT could refer 0800 callers to PHO contacts with confidence. The concept of PHICS itself was strong, despite teething problems, and it fitted well with other information sharing strategies carried out by Healthlinks²⁴.

The success of PHICS had yet to be formally evaluated but anecdotal feedback suggests that there was growing awareness of the role of PHICS in the community. One example of community awareness was seen at a recent Defeat Diabetes hui where it was suggested by a hui participant that PHICS facilitate the gathering of key messages from the hui which could then be posted on the website.

Difficulties experienced by PHICS include: the early departure of the project manager, fragmentation of contracting for PHICS and PHLT information sharing activities, and the existence of a gap between what PHICS provided and the original vision of a community owned service.

The early departure of the project manager did not cause a problem in terms of project implementation, as the website and helpline were fully operational at the time of their departure. But the job of website maintenance then fell to the PHLT staff and other commitments made it difficult for them to fulfil these requirements. This meant that as at October 2005, there were some gaps in the information available with new material not being included and some material out of date. At the time of interview, in November 2005, PHLT were in the process of writing a job description for the appointment of a website technician to carry out maintenance functions and ensure mobility of information.

²² A subcommittee of the PHLT governance board

²³ The 0800 calls are received by PHLT staff and referrals are made as appropriate.

²⁴ Health information sharing is one of the objectives in the Healthlinks 2005-2006 Annual Plan. Activities planned for 2005-2006 include publication of an electronic bulletin *Allpoints*, monthly community forums, and articles published in local newspapers.

The contract for PHICS was separate from the contract for PHLT (and its information sharing activities as mentioned above). This fragmentation means two sets of contract relationships and two sets of reporting requirements for information sharing. Ideally the PHICS component would be seated under the information sharing activities in the PHLT contract and would be funded as one. To some extent PHICS was also fragmented from the reality of the information sharing *process* which was as much about relationships and trust as about providing a mechanism such as the website and helpline. Increasing community ownership and community presence of PHICS would help to bring it closer to the original vision from which PHICS began.

The PHICS advisory group met in September 2005 and identified that there was a gap between what PHICS provided and the original vision of a community owned service. Community ownership was always supposed to be a critical component of the PHICS such that information would be delivered in places where people meet (outreach) such as libraries, churches and schools. There would not be a requirement to 'come to a building' to get the information. The core of PHICS wasn't originally about the website or 0800 number. As a result of the September meeting, increased emphasis had been placed on community ownership and this aspect was to be written in the job description for the website technician.

4.4 Outcomes

PHICS had yet to be formally evaluated and data was not available to the evaluators on utilisation of the services, although audits had been done by C&CDHB. The brief of this evaluation was to provide an update on progress with PHICS, and not to formally evaluate the service.

5. OTAKI COMMUNITY HEALTH WORKER (OCHW) PROJECT

5.1 Context

5.1.1 Community context

A comprehensive profile of Kapiti District was presented in the Kapiti Healthlinks report (Porirua Kapiti Healthlinks Project 2000a). Kapiti Coast District is made up of three geographical communities and is home to large numbers of retired people and Wellington commuters. The area was identified as an ICAH site as part of the initial Porirua Kapiti Health and Disability Services Integration Project. At the time of the establishment of this project Kapiti had a pre-existing health advocacy group, the Kapiti Community Health Group Trust (KCHGT). This group had experienced a recent restructuring at the time the Porirua and Kapiti project was established, and some members of the group actively participated in the governance group and the local project team to support the Healthlinks work.

Originally there had been three groups (one reference group for each of the three geographical communities), but the group had reformed into one at the request of the Health Funding Authority. A strong focus of the work of KCHGT and other health advocacy groups on the Kapiti Coast was the perceived threat to local services, and the need to protect health services available at Kenepuru and Paraparaumu. While each community had its own distinct initiatives, activities and forums for connection, the Kapiti Community Health Group Trust was unique in having representatives from all the communities.

Historically there had been a lack of networking and common vision among health advocacy groups on the Kapiti Coast, both across the geographical area and within the communities, and they perceived the Healthlinks process as having provided a new inclusive model that addressed this issue. Key informants also commented on the high level of skill available for community activities on the Kapiti Coast. People who made themselves available as volunteers were often very familiar with government processes, and at any public meeting on the Kapiti Coast a sprinkling of retired chief executives was likely to be in attendance.

5.1.2 Primary care context

The Kapiti Healthlinks report provides a detailed description of the health status and services in the Kapiti District. This report and the Capital and Coast DHB needs assessment report (2002) note that the health status of people on the Kapiti Coast was better than the average in New Zealand. The latter report suggests, however, that the good health status of the elderly population in Kapiti may mask the higher health needs of youth in the district. The Kapiti Healthlinks report identified key issues for Kapiti as access to services, the integration of services, and emergency service development.

Major changes to the configuration of health services in Kapiti have occurred since the inception of the project. The opening of the redeveloped Paraparaumu hospital, now called Kapiti Health Centre, took place on Friday 31 October 2003. This centre not only continues to provide services that were provided from the old hospital, but was gradually expanding services. In addition, Hora Te Pai, a Māori provider service, had been housed on the same site. Key informants expect this to improve access to health services for Māori in the Kapiti District. The development of PHOs was also a significant development for the district, with two PHOs now serving the population.

5.1.3 Provider profile

The OCHW project was managed by Te Rūnanga o Raukawa Inc Health Services who have a long history of health sector engagement. They have been participating in co-operative and contractual relationships with a range of health sector organisations since 1982. They provide services from bases in

Palmerston North, Levin, Otaki and Shannon. Services include tamariki ora, disability support services, mental health services, mother and baby support services, contraception services and cervical screening.

Prior to the development of the OCHW project, Raukawa Inc Health Services employed eight registered nurses, five enrolled nurses and four community health workers (these were positions, not FTE). They also employed a health manager, a health services co-ordinator and administrative support in each of their bases. Not all of these staff were providing services in Otaki.

Raukawa Inc Health Services delivery was focused on Ngāti Raukawa, other Māori and non-Māori. The Otaki census area unit had a population of 5628, of whom 30% were Māori and 68% lived in meshblocks with NZDep2001 deciles 8–10.

Services offered by Te Rūnanga O Raukawa Inc Health services in Otaki included whānau and tamariki ora (including a mother and baby service), cervical screening, hearing and vision testing, immunisation, mobile nursing services, and rongoa Māori, mental health and disability support services.

Te Rūnanga O Raukawa Inc was an iwi authority mandated to act on behalf of whānau, hapū and iwi members residing in the Manawatu, Horowhenua and Kapiti regions.

In April 2002 when this project was operationalised, a PHO had not been established in Otaki. The Otaki PHO (Otaki Primary Health Organisation Trust) was established in April 2004. As at 1 April 2006, the funding formula for this PHO was access and the enrolled population was 6,156. Of these, 1,922 were Māori and 104 were Pacific people. Midcentral is the associated District Health Board.

5.2 Service development

5.2.1 Implementation

The funding was devolved by the Ministry of Health to MidCentral DHB. The service specification for this contract described it as a mobile outreach service to improve access to primary care services for the people of Otaki, with particular regard to improving access by Māori. Implementation was delayed because the management and detail were renegotiated with the iwi health and social services management and local hapū. These issues were resolved, and two half-time community workers were appointed and began work in April 2002.

The Ministry of Health convened a working group to move this project towards implementation after consultation with the Kapiti Community Health Group Trust. The group first met in April 2001, was chaired by the Ministry representative, and included representatives from: the Ministry of Health, MidCentral DHB, Kapiti Community Health Group Trust, Te Rūnanga O Raukawa Inc Health Services, Otaki Community Health Trust, Social Workers in Schools, and the Otaki Medical Centre. The minutes of the working group meetings document several issues that were debated within the community:

- whether the worker should be a nurse, a social worker or a lay person
- the service to which the worker should be attached – whether it should be a new service, or attached to an existing service
- whether the service would address all the barriers to care in Otaki (eg, transport and cost)
- whether the funding was adequate for the service.

There was agreement that the service should be providing information, developing links between services, providing transport (or information on transport) and support and advocacy.

The funding for this project was a direct outcome of the *Kapiti District Health and Disability Report and Plan 2000* (Porirua Kapiti Healthlinks Project 2000a). The Kapiti Community Health Group Trust also played a significant role in the working group that developed the service specification. However since the

contract had been formally accepted by Te Rūnanga O Raukawa their active role had been limited. The community workers have met informally with the Trust manager, and MidCentral DHB were invited to report on implementation progress at forums.

Key informants at the time of the project implementation expressed some concern about the OCHW project as the funded recommendation. A number of recommendations were included in the Kapiti Healthlinks report, and the selection of this one as a priority was questioned. More than one informant (representing more than one of the original partners) stated that their perception was that what was needed was community nursing services rather than a community worker. However, a member of the original project team informed the evaluator that the issue of a nurse, as opposed to a community worker, was only raised in the working group and in subsequent meetings, rather than in the original community consultations.

Informants identified barriers to service at the medical centre and concerns about the configuration of primary care services in Otaki, and some doubts were expressed about whether this project would be able to address these concerns.

The working party took longer than planned to resolve issues about the shape of the service and to decide on a preferred provider. The form of the project eventually agreed was that the service should be provided by Te Rūnanga O Raukawa Inc Health Services, because they had the existing organisation structure to provide management for the service without the costs associated with setting up a new organisation. To ensure local ownership and guidance there was to be a co-management relationship with Nga Hapū O Otaki. In the initial stages of the project there were some delays while the substance of this relationship was agreed and appointments made to the position. Key informants commenting on the delays believed that it was worthwhile to invest the time necessary to reach agreement and a satisfactory service specification.

5.2.2 Resources

The OCHW project received a total of \$178,269 over three years, which covered the costs of one FTE community health worker, supervision for the worker, the lease of a car to provide the mobile service, and an administrative fee for the provider. There had been a large in-kind contribution by the provider, Nga Hapū O Otaki, who have co-managed the project, and the MidCentral DHB, as the project development had been demanding of time and resources. Is there a connection between these which seem to conflict.

Two part-time workers were appointed to the community health worker roles in April 2002. The appointment of the two workers was seen as allowing for flexibility, with each also being able to provide cover for the other when leave was taken: when one of the workers took long-term leave the other worked full-time in her absence. Both underwent a one-month orientation, during which they worked alongside other workers from Raukawa Inc Health Services and also participated in Te Korowai Aroha training. The two community health workers were appointed at 0.6 FTE each to allow for a full-time service, while having some overlap for attending meetings and passing client information to each other.

The initial appointments were for a three-month trial, after which there was to be a review of the service specifications. This was delayed due to the leave of absence for one of the workers. There had been significant staff turnover, with four women having worked in the roles in the two years of operation. Both of the original appointees have since left the service. The first moved to another role within Raukawa Inc Health Services, and the second resigned due to other commitments that conflicted with the community health worker role. The current appointee had taken the role as a full-time position.

5.3 Inputs

5.3.1 More appropriate health service provision

Two half-time community health workers were appointed in Otaki. The community health workers have provided a referral and support service and transport for patients with no other transport available, built

positive relationships with local services, identified appropriate services for clients and facilitated their referrals, and worked alongside the other kaimahi of Raukawa Inc Health Services.

There had been significant staff turnover during the project (April 2002 to June 2004). One of the original two appointed moved to another position within Raukawa Inc Health Services, and the two part-time workers were replaced in 2004 with a single person taking on the role full time. In each case the community workers appointed have been selected and approved by Ngā Hapū o Otaki, who were seen to be in the best position to identify the most suitable candidates. The initial appointees worked at first in the Rūnanga office, but when space became available in Taaringaroa (a house next door to the marae and central to the township) they established an office there.

In Otaki the vehicle for the community health workers had been a highly valued part of the service. All of the community health workers have been committed to identifying alternatives to transporting clients to appointments themselves, but – particularly for their elderly clients – this had been a crucial part of the service they offer. Transporting the clients also means that the time together could be used informally to identify further issues and client needs, and attending appointments with clients means they were there as advocates should that prove necessary.

5.3.2 Better practice in primary care

Networking was a significant focus of the community health workers activities. They had undertaken significant linking within the health sector, both within and outside Otaki, researching for clients where services are available north or south, which ones were most readily accessible, and organising transport for them. They had taken a systemic approach; for example, encouraging a counsellor to begin work in Otaki, so that the service was available locally. They had also liaised with other government agencies to meet the needs of clients, including housing, WINZ, and the Accident Compensation Corporation. They had built extensive links with local agencies, including the Otaki Health Camp and Te Wananga o Raukawa. (Some of these links have been specific to the particular worker, however, with the turnover in staff meaning that new relationships must be built.)

One of the original workers in the OCHW project upskilled and moved into a new role which was seen as a significant achievement in terms of capacity building. It had taken some time for the relationships with other kaimahi working for Raukawa Inc Health Services to develop, but these became strong and co-operative, with nurses and community health workers working together on some projects

Otaki community health workers highly valued the training provided for them by Te Rūnanga O Raukawa in Palmerston North, and in specialist training in particular areas relevant to their client base.

5.4 Outcomes

5.4.1 Intermediate outcomes

The OCHW project was required to report to MidCentral DHB with regard to service utilisation. Community health workers have been required to record their patient contacts, where the referrals have come from, and where they have been referred on to another provider. The workers themselves have acknowledged that they have not always recorded all the details required, so the utilisation rates present only a partial picture of their work.

The number of clients receiving the service remained consistent for most of the period of the evaluation, with 37 in the first quarter for which there are records and 44 in the final quarter of 2003/04. In the third quarter of 2003/04 there were 84 clients recorded in one quarter. Community health workers had been clear from the time the project was established that they wished to have open days, or hui, on particular health issues as a way of increasing their client contacts. The numbers in this third quarter represent an increase brought about by establishing such open days. The clients provided with services have been more likely to be women, with few clients under 30. The service had largely reached Māori clients.

The number of client contacts per quarter varied considerably over the period of the evaluation, and does not record whether contacts were transporting clients to specialist appointments and staying with them or a brief information or referral contact, making it difficult to draw conclusions about the overall picture. The lowest quarter records 64 contacts, and the highest 141. Such a variation is likely to be the result of gaps in service at times of staff turnover or staff taking leave, given that there was only one FTE worker providing the service.

5.4.2 Health outcomes

As mentioned in the methodology section, ambulatory-sensitive hospitalisations data were not collected for Otaki because the population was too small to make analysis of such data meaningful.

6. ANALYSIS AND IMPLICATIONS

6.1 Summary of key points

The most important impact that the PIA project appears to have had at an organisational level is the introduction and/or expansion of outreach services that were seen to be effective. For some providers, this way of working was new and took longer to 'bed in' within the culture of clinic practice; for others, outreach was 'business as usual', but the funding had allowed them to increase hours and do more effective outreach. The PIA funding provides targeted resource to a high needs community. Key points identified include:

- In the case of GP and nurse utilisation increased rates did occur (not at the expected time, and not in all PIA practices).
- PIA funded practices showed, in some instances, higher utilisation rates for Māori and Pacific compared with those which were not receiving this funding.
- In the case of ambulatory sensitive hospitalisations, rates remained reasonably steady during the period when the new funding streams were introduced, halting previous increases in rates.
- Outcomes cannot be directly attributed to the PIA project due to interactions with the SIA funding stream.
- PIA funding had allowed for innovative service development and increased diversity in approaches.
- Providers who already had experience in outreach service delivery were at an advantage for innovation
- The PIA project was well targeted to Māori and Pacific people, and the outreach approach based on whānau fits well with Māori models of health and service delivery.
- The PIA and SIA funding streams interact in a complementary manner and the independent effects of the funding streams in terms of utilisation were difficult to separate.
- Anecdotal evidence and utilisation data suggest the PIA project was successful in reducing barriers to access to some extent.
- The PIA project had resulted in an increase in the primary care workforce in Porirua and a growth in the skill and confidence of those who specialise in outreach work.
- Co-ordination of services was reflected in collective action across disciplines which had developed over the period of the project
- The provision of funding in itself was not enough to secure the appropriate workforce where there was a shortage of skills, such as Pacific and Maori outreach nurses.
- Outreach work also needs to be supported by sufficient GP and nurse capacity at the practice level
- There has been provider specific investment to upskill health workforce including support for Masters papers for nurses and training opportunities for GPs, nurses and community health workers in particular areas (eg nutrition)
- The Whitireia workshops provided a significant component of workforce development for PIA providers
- The PHICS project was adding value to information sharing strategies in Porirua and fitted well with Healthlinks objectives
- Leadership from across the sector had been vital in establishing the projects
- The political, community and primary care contexts were supportive of the projects in Porirua and Kapiti

- Building intersectoral linkages and moving these linkages into effective action on wider determinants is a long term approach
- Negotiating the complexity of interactions and relationships between and within the health sector and community can be a lengthy process at the outset
- Significant time and resources were required to develop a new approach to primary care
- Voluntary contributions should be taken into consideration when viewing the 'real' cost of services to the providers and the ability to duplicate the services in other settings

6.2 Analysis

6.2.1 Evaluation methodology

The methodology involved collection and analysis of both qualitative and quantitative data. Availability of data was a key consideration in selecting evaluation parameters. There were limitations inherent in both sets of data which influence interpretation of the findings.

For utilisation, the evaluation relied heavily on data collected for contract management purposes by C&CDHB. The main reasons for using C&CDHB data was to reduce the reporting burden on the providers and improve comparability of data between providers participating in the project. C&CDHB and providers have worked intensively to improve the quality of utilisation data and for many providers this involved upgrading equipment and upskilling staff. Prior to the PIA project there was no systematic collection of nursing outreach or community health worker data. This project had provided a means for measuring this activity in a transparent manner. All providers agreed to the collection of this data and business rules around it for consistency.

In interpreting utilisation data it is important to note that PIA funding related to primary care access commenced in November 2002, and capitation funding to Access-funded PHOs commenced on April 1 2003. From April 2003, both funding streams were in effect, and it becomes very hard to make judgements about the independent effects of either funding stream.

Nursing informants and data inputting technicians had commented that nursing outreach data and some of the community health worker activity may be under reported as it does not fit with an invoicing approach (PMS), which had been how much of the primary care data had been collected previously.

Data collected by qualitative methods included observations from site visits, key informant interviews and review of relevant documentation. Conclusions drawn from qualitative on the impacts of this project were therefore based largely on the views of those participating in the projects, both at management and staff levels. Consumers were not interviewed due to limited timeframes and resources.

Because of the small numbers in Otaki, the evaluation of the OCHW project, while it had used the records of utilisation rates provided to MidCentral DHB, had relied primarily on key informant interviews for information about outcomes.

This project enabled systematic integrated analysis of data that can be strengthened and consolidated to enable ongoing evaluation of outcomes. It is hoped that various stakeholders would continue to monitor the results in future years.

6.2.2 Context

The political, community and primary care contexts all were supportive of the projects in Porirua and Kapiti. The ICAH initiatives from which these primary care projects were born had high level political support. The Ministry of Health took a leadership role. As a result of these ICAH activities and

community consultation surrounding them, there was a high degree of 'buy-in' and support from the community for initiatives to improve access to primary care.

The Porirua communities, through the Porirua Kapiti Healthlinks Project, had identified improved access to primary care as a high priority for improving health and disability outcomes for the people of Porirua. The Kapiti Healthlinks report similarly identified lack of access to information and services (including transport to existing services) as problems for Otaki. There was a high level of skill and energy available for community activities in Porirua and the Kapiti Coast.

Even prior to the ICAH projects, Porirua had a long history of health research and advocacy, with substantial health research taking place in Porirua over approximately the last 30 years. Porirua city had a distinct community identity. Kapiti similarly had pre-existing health advocacy groups, working both for the whole community and within the particular geographical communities.

In the primary care sector, the parallel process of establishing Primary Health Organisations meant that the PIA initiatives were working alongside complementary SIA initiatives. In addition, some providers were 'primed' to the outreach style of service delivery because their style was already geared in this direction prior to the PIA project. The PIA project was reported to have acted as a model for SIA services in Porirua in some instances.

All of these contextual factors were important features of the landscape in which the PIA project was operating.

6.2.3 Service Development

6.2.3.1 Resources

Resources included financial investment and the PIA workforce. The voluntary contributions made to the project were substantial and at times posed a risk of burnout for staff in some services. These contributions should be taken into consideration when viewing the 'real' cost of services to the providers and the ability to duplicate the services in other settings.

The service components funded through PIA were spread unevenly across the five providers but collectively covered all aspects of service delivery originally intended for the project. Each provider employed strategies that were intended to reduce the barriers to primary care as stated in the input-outcome model, these barriers being financial, information and transport related. Each provider also had aspects of improving practice quality included in their contract.

All providers spoke about the growth in the demand for access services over time due to increasing community awareness. What was noticeable during this period was the stable nature of the PIA workforce. In 2005, employment of appropriate staff was still a problem for some providers. There were gaps in the Pacific and Maori nursing workforce, and the GP workforce. It was apparent that the provision of funding in itself was not enough to secure the appropriate workforce employment in these areas. There continued to be a significant amount of goodwill demonstrated by both staff and management of providers to ensure access needs were met. For example, weekend and evening work was often done voluntarily and staff attended training in their own time.

6.2.3.2 Implementation issues

During the implementation of the PIA project a number of factors caused delays including:

- The previous competitive environment between providers
- The previous under-resourcing for the high level of health need and demand for services.
- Lack of strong working relationships between providers in Porirua

- Ongoing restructuring of the health sector which resulted in changes to some of the key health agencies involved in the development of the projects.
- The need to carry out further community consultation to be clear about community needs and manage community expectations;
- The lengthy process before contract negotiations also delayed implementation
- Inability to find suitable staff

As at June 2005 all the above factors had been resolved. Providers were co-ordinating services between themselves and between the two PHOs. Community engagement had been strengthened through specific projects such as Toiora; all contracts had been signed off; and the workforce had been stable over the past twelve-twenty four months and was increasing in confidence.

6.2.3.3 Relationship between PIA and SIA funding streams

The PIA and SIA initiatives were funded separately although they were intended to be complementary and duplication of funding was avoided. The early stages of the PIA project pre-ceded the development of PHOs and of the SIA funding stream. Participants felt that the PIA funding allowed for increased diversity in approaches compared with previous arrangements. The effect of SIA funding on diversity of approach was not a focus of this evaluation and therefore it is not possible to compare the two funding streams in this respect. However, participants expressed the view that the PIA funding created gains separate from any other primary care initiatives, because of the additional funding it provided and the flexibility it allowed. They were concerned that this flexibility might be lost if the funding was delivered via a different funding stream. It was beyond the scope of this evaluation to comment on the validity of these views.

6.2.4 Inputs

6.2.4.1 More appropriate health service provision

Providers identified benefits for themselves from the projects, including: having enough time to spend with clients to do their job well; having time to build relationship with their clients and within the sector; and the ability to see clients in the community which allows a better understanding of their health needs. Providers reported that clients were starting to change the way they interacted with services and that the clients had raised expectations.

The outreach mode of service delivery which characterises the PIA and OCHW projects was reported to have improved access for hard-to-reach clients in several ways including:

- The advantages for outreach staff (nurses and CHWs) of working in the community included being able to talk to people who have not previously accessed services, resulting in improved relationships with clients.
- Nurses and community health workers were able to spend an intensive amount of time at a family level providing advocacy, translation or transport services for clients.
- Working with patients in their home had enabled nurses and CHWs to observe first hand the broader determinants of health and to access support and advocate for the family to change some of the determinants.
- Working from a family perspective in the home or community provided opportunities to talk to other family members about a range of health issues.

Anecdotal evidence was provided of direct successes in terms of improved access to services, such as reduced GP waiting times and increased flexibility of hours (evening clinics or locum fill-in over lunch hours) which led to a decreased after-hours attendance (as people were being seen during working hours); and noticeable improvements in access for the hard-to-reach with greater frequency of visits and

increased phone consultations. Providers reported that patients were now starting to view primary care services differently in particular seeing the nurse as a key part of primary care and having increased choice about how and where services were delivered.

High needs populations and those experiencing poorer health outcomes such as Māori and Pacific were accessing additional services under the PIA projects. Providers were able to identify a Tiriti o Waitangi framework as part of their intervention logic. Organisations such as Ora Toa and Maraeroa, that specifically serve predominately Maori communities, have been able to build capacity and develop services to improve access for Maori through the PIA project.

The PHICS project appears to be maturing and adding value to other information sharing strategies in Porirua. The intensive management received by PHLT and C&CDHB have allowed PHICS to benefit from lessons learnt from early difficulties, and plan for improvements.

The 2004 baseline report identified difficulties and weaknesses with the PIA project including role confusion, lack of strategic direction, lack of formal arrangements for teamwork between services, lack of data collection against which to measure change, and failure to meet community needs or engage the community (eg, the community garden and quarterly workshops). The 2005 interviews noted a more confident approach with the interventions therefore reducing some of the role confusion.

6.2.4.2 Better practice in primary care

Collective action

Collective action across the PIA workforce, and between participating providers, developed over the period of the evaluation. In the initial stages there were instances of community health workers and nurses working together across providers to deliver services for the PIA project. This collaboration seemed to occur mostly around specific issues or in a workforce development or networking setting. All providers noted that the training accessed through the Whitireia Community Polytechnic had been the most positive example of linkage between PIA providers. Interviews carried out in 2005 have identified an increase in collective action across disciplines.

Links with other services

All providers have worked to establish links relevant to their client base. Many links have been made within the health sector and externally, including education, income support, police, courts, housing, Inland Revenue Department, Accident Compensation Corporation, immigration and local government sectors, and with social support agencies such as food banks. Some of the PIA providers have developed intersectoral partnerships and continued to build on these over the duration of the project.

Workforce development

There had been a notable increase in the knowledge and confidence of the workforce involved with this project. All providers have attended workshops funded by the PIA project and run through Whitireia Community Polytechnic, and have had the opportunity to review their practices and explore different ways of working. The Whitireia workshops became recognised part of ongoing training, information sharing and collegial networking among the primary care workforce in Porirua.

Workforce development was ongoing and had the commitment of both staff and employers. As well as attending the Whitireia workshops, one of the nurses had almost completed her independent practitioner training, another had almost completed a Clinical Masters programme. Other nurses had completed specialist training such as smear taking. The CHW workforce had also up-skilled significantly with a range of training options being utilised.

Organisational support with regard to a supportive work environment had given some nurses the ability to rotate clinical and outreach roles if they wish, and many community health workers and nurses have flexible hours and a time-in-lieu policy. A number of staff interviewed commented that they received significant support from their organisations both in terms of training but also the trust placed in their

ability to implement a range of interventions aimed at improving access. Managers also spoke of the support they received from the planning and funding team of the Capital and Coast DHB.

Intervention logic

The ability of providers to describe clear intervention logic developed greatly during the course of the project. At the outset there was no clear and shared understanding of intervention logic. However, by 2005 all participants acknowledged the wider determinants of health and the need to address these if health outcomes were to be improved. It is possible that the Whitireia workshops contributed to this growth in knowledge and confidence.

6.2.5 Outcomes

Primary health care utilisation rates were measured over a relatively short period of time and largely serve the purpose of providing a baseline for future monitoring. It should be noted that the collection and use of primary health care utilisation data in Porirua is a relatively recent activity, and hence there is a limited data context in which to understand these findings. In the absence of longer-term trends data at this stage only preliminary observations can be made. Interpretation of these observations is made additionally challenging because of the difficulties of separating the effects of the PIA and SIA funding streams.

Two important outcomes that were expected as a result of PIA funding are 1) increased primary health care utilisation rates for all groups, especially Māori, Pacific and people living in deprived areas, and 2) a decline in the rate of ambulatory sensitive hospitalisations. In the case of GP and nurse utilisation increased rates did occur, but not at the expected time, and not in all PIA practices. In the case of ambulatory sensitive hospitalisations, rates remained reasonably steady during the period when the new funding streams were introduced, halting previous increases in rates.

In terms of combined GP and nurse utilisation rates, ICAH funding related to primary care access commenced in November 2002, and capitation funding to Access-funded PHOs commenced on April 1 2003.

- There was a marked increase in total utilisation in the quarter commencing 1/4/2004 in six of the practices with Improving Access funding (the Ora Toa practices, PUCHS, Waitangirua and Dr Gaus).
- Utilisation rates for Māori and Pacific people were somewhat higher in some of the practices (Ora Toa practices and PUCHS) which received PIA funding compared with those which were not receiving this funding.
- In the Ora Toa practices and PUCHS, utilisation rates for the Other ethnic group were higher than the rates for Māori and Pacific.
- In the Ora Toa practices and PUCHS rates for the Other ethnic group were higher than they were in practices not receiving Improving Access funding.

For ambulatory sensitive hospitalisations:

- Overall, ambulatory sensitive hospitalisations increased between 1994/95 and 2004/05.
- Rates remained reasonably steady during the period when the new funding streams were introduced, halting previous increases in rates (this finding applies overall, and to Māori, Pacific and those living in the most deprived areas).
- There were much higher rates of ambulatory sensitive hospitalisation for people living in the most deprived areas compared with those living in the least deprived areas, and for Maori and Pacific Island people compared with non-Maori and non-Pacific people.

For diabetes detection and control:

- Overall there was a relatively high annual check rate for people with diabetes.
- Overall diabetes case detection was lowest for Māori.
- Improvement was observed in diabetes control ($HbA_{1c} < 8$) in Porirua Plus over the period 2003-2005.
- Overall diabetes control ($HbA_{1c} < 8$) was poorest in the Pacific group.

- Retinal screening rates were similar in all ethnic groups, and no trends were discernable over the period 2003-2005.

For emergency department utilisation:

- Emergency department utilisation rates increased between 2004 and 2005 for Maori, non-Maori non-Pacific and the under fives, but remained relatively stable for Pacific.
- Rates were consistently higher for males than for females.

6.2.6 Critical success factors

The key critical success factors identified in the evaluation were leadership, experience and workforce development. The leadership provided by the Ministry of Health and the DHBs had been vital in establishing this project. The willingness to work closely and collaboratively with providers to develop the necessary reporting structures was just one aspect of this. Strong community leadership had also been exhibited by providers who were willing to work collaboratively and show initiative. There were some good examples of collaboration in the community, although some informants report that there was a need for collaboration to be developed further.

Those agencies who were already experienced in this work were in a position to extend the vision of community engagement to include more innovative approaches to improving primary care access; however, some of these approaches were not immediately successful and required reworking.

The provision of funding for workforce development had been important in fostering inter-provider relationships and had provided an opportunity for self-directed training geared specifically to the primary care workforce needs.

6.3 Implications

6.3.1 Ministry of Health

The PIA project was a government initiative, supported from the outset by the Ministry of Health. Results of this evaluation indicate that the initiative had been successful in fostering innovation and reducing barriers to access. The main implication for the Ministry of Health is that if this style of primary health care provision is to be sustained, there is a need for ongoing dedicated funding which allows for flexibility of approach.

6.3.2 Capital and Coast District Health Board

C&CDHB had made a large investment in this project in terms of commitment to the kaupapa, intensive management of the contracts and improving the quality of data provided by way of quarterly monitoring reports. The foundations of this initiative have been laid, and its maintenance would be relatively easy given adequate funding. It is important to note that there had been a deliberate approach to prevent any potential for double funding so all Services to Improve Access initiatives were additional to and separate to PIA services, staff and projects. The main implication for C&CDHB is that PIA funding would need to be sustained if this initiative is to continue.

6.3.3 Primary care providers

There have been significant transaction costs for PIA providers with almost two years of 'process' before contracting as well as major new management requirements for recruitment, reporting and participation in community consultation and feedback, and in the evaluation process. These additional requirements

were largely unfunded. New staff were in place and providers were developing trust, familiarity and cohesion within and across providers and communities. Outreach had been successful in identifying more need and creating better links with the result of more demand on practice-based staff. There had been limited ability to expand due to facilities, recruitment difficulties etc. The gains made on the ground would be relatively easy to maintain given ongoing funding.

APPENDICES

Appendix 1: Full interview schedule with research themes and associated prompts

General questions

1. **Has the PIA project had (or is likely to have) a positive impact on health and disability outcomes?**
2. Has the PIA project had (or is likely to have) a positive impact on health and disability outcomes for population groups experiencing worse health outcomes in the communities involved?
3. What have been the key critical success factors in implementation of the PIA project?

Second layer questions – relating to innovation and interaction with SIA funding

4. **Is the PIA funding allowing for innovation or changes to practice?**

Prompts

- What intervention logic is being used by the providers to implement the PIA project eg community development model, Whare Tapa Wha, Ottawa charter, etc
- Why should the PIA project (or style of service delivery) continue rather than be subsumed into the PHOs? What value does PIA add?
- How does the funding package and service specs impact on the providers ability to deliver improved access?
- How do different providers interpret and implement the PIA project- what are the advantages for providers and/or consumers ?
- What are the differences between PIA services and those purchased under other funding streams eg PHO

5. **How do the SIA and PIA funding streams or service components interact?**

- What are the differences between PIA services and those purchased under PHO funding prompt
- What changes have occurred in culture and practice?

REDUCING BARRIERS TO ACCESS

6. **Is the PIA project reducing barriers to access?**

- How do clients gain access to the range of services provided under PIA?
- Do referrals happen effectively and or in a different way from prior to PIA?
- Who does referrals and how?
- Do referrals advantage certain groups if so who?
- Does the changing nature of workers employed reflect a need to develop criteria for referring clients on to the outreach nurses?
- Are there still access barriers for some clients? - who and why?
- What was the outcome from this initiative in the community's eyes versus the outcome in the eyes of the funder and DHB?
- Once clients access services is there any change in how services are delivered under PIA?

MORE APPROPRIATE SERVICE PROVISION

7. What changes have occurred in the workforce as a result of PIA?

- what made these happen
- what infrastructure changes have been made to accommodate changes in workforce eg job descriptions, workforce development training via Whitireia

8. How does the work under PIA reflect integration and or co-ordination?

- Do the CHW, nurses and doctors talk to each other, use triage systems that utilise the skills of each worker appropriately?
- What were the drivers for the teamwork?
- How and why was the teamwork successful?
- How is intersectoral activity happening or not happening?

PROVIDER CAPACITY BUILDING

9. What does workforce development involve?

- What were the areas identified for workforce development by the staff in PIA services?
- What specific improvements have been made in the area of workforce development?
- What skills differentiate access nurses or is it just the funding stream?
- What training do nurses need to provide a particular style of primary care that is different from being a 'practice nurse'?
- Did participants find the workshops to be useful?
- How were the Whitireia workshops recognised by the sector?

10. How has the infrastructure of the providers (such as access to facilities and cars) helped/hindered their ability to provide services and be innovative?

- What specific improvements have been made in the area of increased information technology (IT) capacity?
- How has improved data quality been used to support the PIA activities?
- What impact has the DHB played in improving IT capacity (in terms of expertise and time)? Has the PIA improved the infrastructure/capacity of the provider involved?
- What is required to build infrastructure for the smaller providers?
- Which providers are best placed to take advantage of funding opportunities?
- What have been the transaction costs for providers of developing contracts and business plans? Has this been disproportionate for smaller providers?
- What has been the reporting burden for providers? Has this been disproportionate for smaller providers?

PHICS update

11. What are the pros and cons of the PHICS components?

- What are the pros and cons of PHICS
- What progress has been made to date?
- Has the provider or funder identified markers used to evaluate effectiveness – if so any comment on these- review reports to date?

- how has PHICS impacted on access for the population of Porirua?
- How is PHICS meeting the service specs?

Whitireia training

12. How effective has the Whitireia training been?

- What were the areas identified for workforce development by the staff in PIA services?
- How were these areas identified?
- How were the workshops provided by Whitireia received by students and the sector?
- What skills differentiate access nurses from practice nurses? (or is it just the funding stream?)
- What training do nurses need to provide the style of primary care required for outreach work? How is this different from being a 'practice nurse'?
- What changes, if any, have you made to the postgraduate studies programme as a result of the requirements of outreach nursing in Porirua?

Appendix 2: Data definitions used in the analysis of the PIA project

Table 8: Baseline data elements

Variable	Analyses	Source	Status
Aggregate utilisation of GPs, practice nurses, outreach nurses and community workers	For specific practices, annual rates of utilisation by: age group, gender, ethnicity, NZDep	Practice or organisation records via Capital and Coast DHB	Received
Utilisation of GPs	For specific practices: annual rates of utilisation by: age group, gender, ethnicity, NZDep	Practice or organisation records via Capital and Coast DHB	Received
Utilisation of practice nurses	For specific practices, annual rates of utilisation by: age group, gender, ethnicity, NZDep	Practice or organisation records via Capital and Coast DHB	Received
Utilisation of new community (mobile) nurses	For specific practices, annual rates of utilisation by: age group, gender, ethnicity, NZDep	Practice or organisation records via Capital and Coast DHB	Received
Utilisation of community health workers	For specific practices, annual rates of utilisation by: age group, gender, ethnicity, NZDep	Practice or organisation records via Capital and Coast DHB	Received
After hours and emergency department utilisation	For specific places, annual rates of utilisation by: age group, gender, ethnicity, NZDep and/or Community Service Card holder status.	Kenepuru Hospital	After hours data not received; emergency department data received; utilisation by demographics not received at time of report completion
Immunisation rates	Annual rates	Practice or organisation records via Capital and Coast DHB	Not received at time of report completion
Cervical screening rates	Annual rates	Practice or organisation via Capital and Coast DHB records	Not received at time of report completion
Breast-screening rates (if possible)	Annual rates	Practice or organisation records via Capital and Coast DHB	Received
Diabetes annual checks coverage (if possible)	Annual rates	Practice or organisation records via Capital and Coast DHB	Received
Prescribing of specific pharmaceuticals which can be interpreted	Volume and cost	DHB	Not received at time of report completion

Table 9: Census area units selected for inclusion in the analysis

CAU96 code	Domicile code description
565601	Pauatahanui
565602	Endeavour
565603	Resolution
565700	Paekakariki Hill
571500	Papakowhai
571800	Pukerua Bay
571900	Plimmerton
572000	Mana–Camborne
572100	Paremata–Postgate
572200	Discovery
622201	Inlet–Porirua Harbour
565604	Adventure
570400	Titahi Bay North
570500	Onepoto
571000	Ranui Heights
570600	Titahi Bay South
570700	Elsdon–Takapuwahia
570800	Porirua Central
570900	Porirua East
571100	Cannons Creek North
571200	Cannons Creek South
571300	Cannons Creek East
571400	Waitangirua
571600	Ascot Park

Table 10: Areas with NZDepCAU values of 1, 2 and 3

CAU96	CAUname96	NZDepCAU96 weight average scale	NZDepCAU2001 weight average scale
565601	Pauatahanui	1	1
565602	Endeavour	1	1
565603	Resolution	1	1
565604	Adventure	2	2
565700	Paekakariki Hill	1	1
571500	Papakowhai	1	1
571800	Pukerua Bay	2	2
571900	Plimmerton	1	2
572000	Mana–Camborne	1	1
572100	Paremata–Postgate	1	1
572200	Discovery	1	1

Table 11: Areas with NZDepCAU values of 9 and 10

CAU96	CAUname96	NZDepCAU96 weight average scale	NZDepCAU2001 weight average scale
570600	Titahi Bay South	10	9
570700	Elsdon–Takapuwahia	10	10
570800	Porirua Central	10	10
570900	Porirua East	10	10
571100	Cannons Creek North	10	10
571200	Cannons Creek South	10	10
571300	Cannons Creek East	10	10
571400	Waitangirua	10	10
571600	Ascot Park	9	9

Table 12: Conditions included in the analysis of Ambulatory-sensitive hospitalisations

Condition	ICD-9-CM codes
Angina	4111, 4118, 413, 7865
Respiratory infections	460, 465, 4660, 480–483, 485–487
Dental conditions	521-3, 525, 528
Skin cancers	140, 172, 173
ENT infections	381–383, 461–463, 4721
Asthma	493
Gastroenteritis	001–009, 5589, 7793, 7870, 7879
Myocardial infarction	410, 4110, 412
Congestive heart failure	428, 5184
CORD	490–492, 494, 496
Cellulitis	680–686
Tuberculosis	010–018, 137
HIV/AIDS	042
Oral cancers	141, 143–146, 148–149, 161
Colorectal cancer	153–154
Lung cancer	162
Breast cancer	174
Nutrition	260–269, 280, 281
Alcohol-related conditions	291, 303, 3050, 4255, 5353, 5710–5713
Other infections	023, 027, 034–035, 084, 7700, 7711–7712, 7714–7719
Immunisation preventable	032–033, 037, 045, 055–056, 072, 3200, 7710, 7713
Hepatitis and liver cancer	070, 155
Sexually transmitted diseases	090–099, 6140–6145, 6147–6169, 633
Cervical cancer	180
Thyroid disease	240–244
Diabetes	250, 2510, 2512
Dehydration	2760, 2765
Epilepsy	345, 7803
Rheumatic fever/heart disease	390–398
Hypertensive disease	401–405, 4372, 2768
Stroke	431, 433, 434, 436
Peptic ulcer	531–534
Ruptured appendix	540–54019
Obstructed hernia	5500–5501, 551–552

Condition	ICD-9-CM codes
Kidney/urinary infection	590, 5990
Failure to thrive	7833–7834
Gangrene	7854
Road traffic injury	E810–829
Poisoning	E850–869
Swimming pool	E8830, E9105, E9106
Recreation injury	E8840, E8845
Sport injury	E8860, E9170, E927
Fire	E890–899
Drowning	E910–9104, E9107–9109, E984
Suicide	E950–959, E980–989

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