Pacific Best Practice Cardiac Rehabilitation Project Evaluation Report

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December 2013

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Acknowledgements

This project was made possible through funding from the Pacific Grant Fund, a fund of the Ministry of Health.

We would like to thank all those involved with the programmes – the provider organisations, programme co-ordinators and staff, and members of the community who have participated in the evaluation. We appreciate the time you have given to the evaluation and your willingness to contribute your valued knowledge and experience of the programmes. We would also like to thank Jan Sheeran and Lisa Morice for their work in proofing and formatting this report.

Executive Summary

Introduction

The purpose of this report is to document three cardiac rehabilitation programmes as part of a process and impact evaluation. The programmes covered in the evaluation are:

1. The Pacific Health Heart Programme, Middlemore Hospital
2. The Healthy Heart Programme, Auckland City Hospital
3. Manawa Ora Programme, Te Hononga o Tamaki me Hoturoa

Evaluation Aims

The aims of the evaluation are:

- To determine best practice for cardiac rehabilitation programmes for Pacific peoples
- To collect and present evidence about the outcomes arising from the approach to demonstrate what works for Pacific peoples so that successful practice can be applied across the health sector

Evaluation design and approach

The evaluation used a case-study design to examine aspects of the cardiac rehabilitation programmes. Document reviews, observation, in-depth interviews with patients and their whanau and focus group interviews were used to address the following questions.

1. What do the cardiac rehabilitation services consist of in practice?
2. What aspects of the programmes work well and what could be improved?
3. What are the key aspects that contribute to Pacific participation and completion of cardiac rehabilitation?
4. To what extent have the outcomes been achieved?

Findings

Case 1: Pacific Healthy Heart Programme, Middlemore Hospital

Key strengths of the programme: delivery by Pacific staff and in Pacific languages; aimed at Pacific patients; information and skills delivered effectively, engaging for participants; positive staff attributes; building of relationships and high levels of comfort.

Key aspects contributing to programme participation or non-attendance and completion of the programme: patient perception of need; complexity of health issues; transport; location; and work, family and other commitments.

Key outcomes from the programme: increased participant knowledge and understanding of their heart condition and factors that influence wellbeing and heart health; motivation to change; and increased physical activity and cooking healthy food.

Key areas for improvement: increased programme resources; systematic data collection and; regular monitoring of data and programme effectiveness.

Case 2: Healthy Heart Programme, Auckland City Hospital

Key strengths of the programme: informative, useful and relevant information; building of relationships; and staff expertise and support.

Key aspects contributing to programme participation or non-attendance: patient perception of need; transport; work, family and other commitments; difficulties with language (only English is spoken) and comprehension; and feelings of discomfort being the only Pacific person in the room (staff or participants).

Key outcomes from the programme: increased participant knowledge and understanding of their heart condition and factors that influence wellbeing and heart health and; motivation to change and; increased physical activity and a reduction in tobacco consumption

Key areas for improvement: communication and language that meet the needs of Pacific participants; more group discussions and engagement with staff delivering the programme; increased Pacific attendance to reduce feelings of discomfort and; systematic data collection alongside regular monitoring of data and programme effectiveness.

Case 3: Manawa Ora Programme, Te Hononga O Tamaki Me Hoturoa

Key strengths of the programme: home based; tailored to individual need, supportive and respectful attributes of the Lifestyle Coach; and extensive community and social services networks.

Key aspects contributing to programme participation or non-attendance: language barriers e.g. delivered in English; patient perception of need; and low numbers of referrals.

Key outcomes from the programme: increased participant knowledge, understanding and management of their heart condition. In particular, weight management; learning skills to choose and eat healthier foods; and increasing physical activity safely.

Key areas for improvement: increased programme resources; increased referrals; improved and systematic data collection and; regular monitoring of data and programme effectiveness.

Key Findings

Across the three case studies key learnings for programme providers were identified along with key aspects that contribute to the effectiveness of programmes for Pacific peoples, and improved participation and completion of cardiac rehabilitation programmes.

A major challenge is attendance and completion. Although definitions of completion rates vary between programmes, Pacific peoples had low rates of attendance and completion. This is an area needing immediate attention. Language, transport and work, family and other commitments are barriers for many Pacific patients. Patient perception of need is an area of concern. Some Pacific patients believed that they received adequate information from clinical experts regarding their heart condition or felt well and therefore did not need to attend a cardiac rehabilitation programme. Patients who said they would attend but did not may have agreed out of politeness, not seriously considering attending. There is an opportunity for cardiac rehabilitation staff to address these issues early on in the referral process by clearly identifying how the programme could be useful, making them feel welcome, allowing concerns to be raised and providing options e.g. day or evening sessions and home based visits.

The findings show that it is important to deliver cardiac rehabilitation programmes that are specifically aimed at Pacific peoples rather than providing generic programmes. For example: relevant content and language; Pacific staff and; the inclusion of Pacific worldviews and experiences. Also, being in a group with other Pacific peoples impacted positively on comfort levels. Friendly and supportive staff who are good communicators promoted engagement by Pacific participants and helped motivate them to make changes. However, the relatively short duration of the programmes was raised and participants expressed the need for longer term support in order to maintain positive changes.

Improved and systematic data collection with regular monitoring of both data (e.g. Pacific referrals, attendance and completion) and programme effectiveness is also required.

Introduction

This report covers a process and outcome evaluation of three cardiac rehabilitation programmes currently offered in the Auckland region. It was undertaken by SHORE and Whariki Research Centre with funding made available by the Pacific Grant Fund. The evaluation was conducted in collaboration with: Auckland City Hospital Cardiac Rehabilitation Nurse Specialist Team, Middlemore Hospital Cardiac Nurse Specialist Team, and the Manawa Ora Programme Team from Te Hononga o Tamaki me Hoturoa between August 2012 and July 2013. The key components of the process and evaluation included:

- A document review of relevant programme documents, reports and materials.
- Observing the cardiac rehabilitation programmes in action.
- The development of a logic model for each programme to show the intervention and intended outcomes.
- Conducting interviews with programme participants.
- Conducting focus group interviews with programme providers and staff.

Background Literature

Cardiovascular disease in New Zealand

In Aotearoa/New Zealand cardiovascular disease is the second leading cause of death after cancer and the principal cause of death for Pacific peoples (Tukuitonga, 2013). Mortality rates for cardiovascular disease are also consistently and significantly higher for Pacific peoples than for the general New Zealand population (Ministry of Health, 2012). Although there has been an overall decline in the general population rates of cardiovascular disease deaths over the last thirty years, Pacific cardiovascular disease rates have not declined to the same extent (Statistics New Zealand and Ministry of Pacific Island Affairs, 2011).

Cardiac Rehabilitation

For those who experience a cardiac event, local and international research suggests that cardiac rehabilitation reduces the risk of further heart attacks and improves quality of life (Henwood & Moewaka Barnes, 2008; Jolliffe et al., 2001). Cardiac rehabilitation is defined as being: “The co-ordinated sum of interventions required to ensure the best physical, psychological and social conditions so that patients with chronic or post-acute cardiovascular disease may, by their own efforts, preserve or resume functioning in society,

through improved health behaviours, that slow or reverse progression of disease" (Goble, 1999).

The main goals of cardiac rehabilitation are:

1. To prevent further cardiovascular disease events by empowering patients to initiate and maintain lifestyle changes.
2. To improve quality of life through the identification and treatment of psychological distress.
3. To facilitate the patient's return to a full and active life by enabling the development of their own resources (New Zealand Guidelines Group, 2002).

There are three phases of cardiac rehabilitation:

1. Phase I – Inpatient rehabilitation that is delivered in hospital and includes mobilisation and education to help the patient and family develop an understanding of heart disease.
2. Phase II – Outpatient rehabilitation programme that begins as soon as possible after discharge and referral. It usually involves: an exercise component; education sessions aimed at increasing understanding of the disease process; risk factors; treatment and nutrition advice; guidance for the resumption of physical, sexual and daily activities including work; and psychosocial support.
3. Phase III – Long-term maintenance of skills and behaviour changes learned from Phase I and Phase II. In Aotearoa/New Zealand, this phase is primarily the domain of independent community 'cardiac clubs' which act as support groups.

In order to achieve success, cardiac rehabilitation needs to be comprehensive and encompass a multifaceted and multidisciplinary approach. Sessions include: psychological support that empowers patients to make lifelong changes and manage psychosocial aspects of life; nutrition, weight and exercise management; pharmacotherapy; smoking cessation; and on-going personal follow-up and support (New Zealand Guidelines Group, 2002).

Participation and completion issues

Despite evidence proving the benefits of cardiac rehabilitation, research indicates that uptake of cardiac rehabilitation is less than optimal. A national audit of 30 cardiac rehabilitation services found that only 36% of eligible patients were referred to Phase II cardiac rehabilitation services, and the completion rate of these patients was only 9% (Doolan-Noble, Broad, Riddell, & North, 2004). Internationally, participation rates in CR were reported to be less than 50% (Neubeck, 2012).

Reasons for non-attendance and non-completion of cardiac rehabilitation are well documented in the literature but there is no specific Pacific research in this area. Research findings highlight: travel distance and travel issues (Jolly, 2007; Leung, 2010), work commitments (Kerins, 2011); illness (Grace, 2009); perception of need (Candido, 2011). Specific barriers to attendance have also been found to exist within culturally and linguistically diverse populations. These include: language barriers; cultural appropriateness of information; perception of being negatively stereotyped; and negative experiences with cardiac rehabilitation (Neubeck, 2012; Rose, 2011).

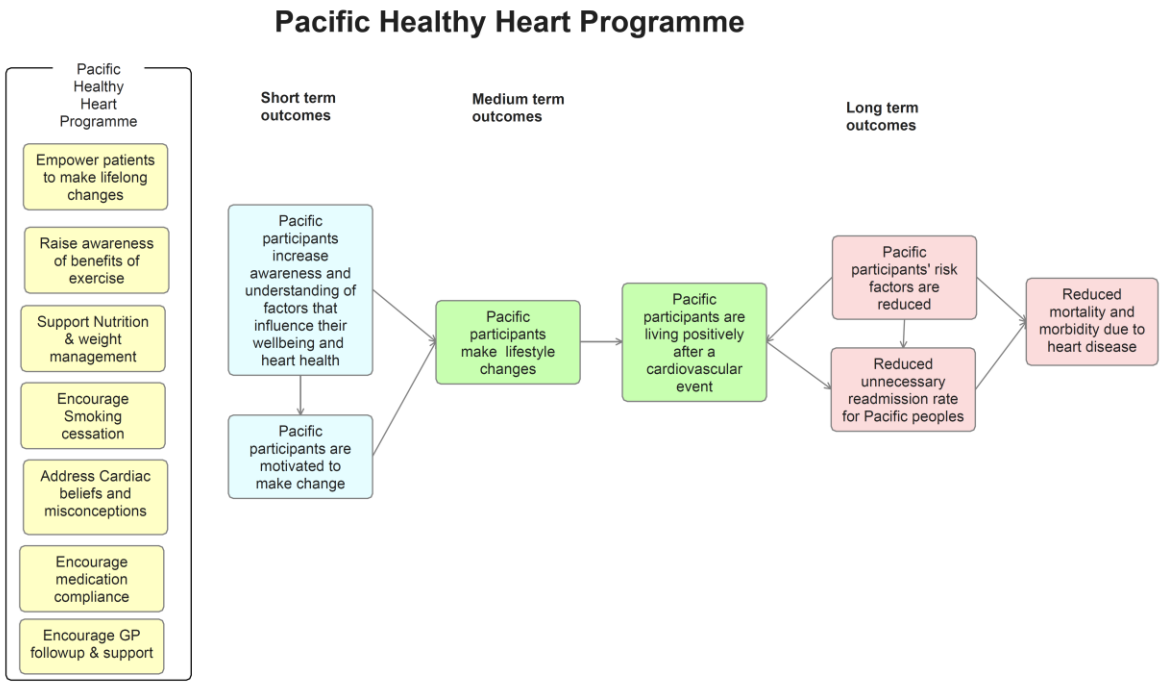
Evidence also suggests that lower socio-economic groups face multiple barriers to accessing health care (Blakely, Fawcett, Atkinson, Tobias, & Cheung, 2005). For Pacific peoples, barriers include prevailing cultural norms; health beliefs, poor rapport with general practitioners, language/communication barriers, the, cost of health services and access to transport (Ludeker M., 2012; Mauri Ora Associates, 2010; Southwick, 2012).

Programme Description

Three Phase II cardiac rehabilitation programmes in the Auckland region were evaluated. While the following section provides a brief outline of these programmes, they will be dealt with in more depth under the relevant programme heading in the evaluation section of the report.

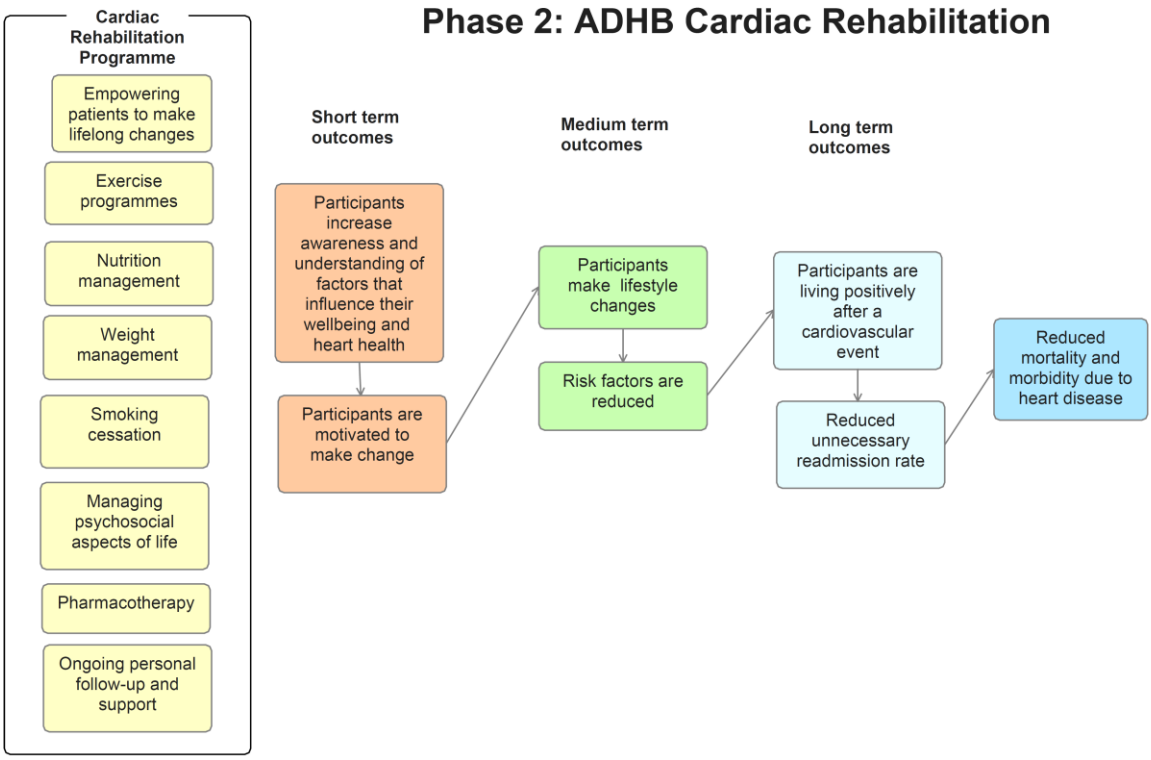
Pacific Healthy Heart Programme: Middlemore Hospital

The Pacific Healthy Heart Programme is a community-based programme delivered by the Middlemore Hospital Cardiac Rehabilitation Nurse Specialist team (Counties Manukau District Health Board) with the support of the Pacific Cultural Resource Unit. The programme uses educational sessions delivered within ethnic group settings, and where possible in the appropriate ethnic languages. The overall aim is to empower Pacific patients to make lifelong behaviour change through increasing knowledge and skills to promote their cardiovascular health.



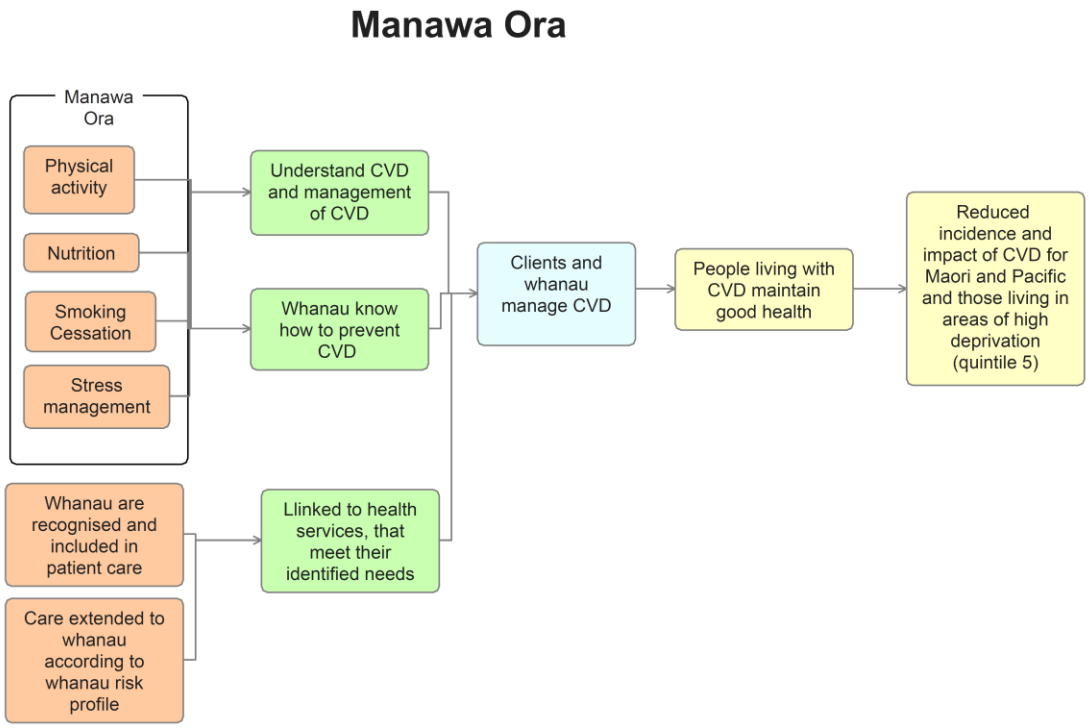
Healthy Heart Programme: Auckland City Hospital

The Healthy Heart Programme is a community-based Phase II cardiac rehabilitation support programme delivered by the Auckland City Hospital Cardiac Nurse Specialist team (Auckland District Health Board) alongside a multidisciplinary team of health professionals. It is comprised of education sessions on a number of cardiac health-related topics with overall aims to: educate, support and empower patients, families and whanau to make positive lifestyle changes and to self-manage their heart conditions.



Manawa Ora Programme: Te Hononga O Tamaki Me Hoturoa

Manawa Ora is a home-based, Phase II cardiac rehabilitation programme delivered by a nurse-trained Lifestyle Coach and Whanau Ora worker. This programme has a strong focus on nutritional and physical activity sessions. The overall aim is to support patients and their whanau to make lifestyle changes for positive health and wellbeing.



District Health Board Strategic Priorities

Pacific priorities in strategic documents (Auckland and Counties Manukau District Health Boards) include increasing Pacific access to health care, improving quality of care and reducing inequities.

The *Pacific Health Development Annual Plan 2013/14*, Counties Manukau, has a Cardiac Rehabilitation priority. The plan notes that the Pacific Cardiac Rehabilitation service was implemented. The Cardiac Rehabilitation Priority includes a key indicator: "Pacific fanau [are] engaged with cardiac rehabilitation services in the community" leading to reducing mortality through improved cardiovascular health. A specific activity is to "work with AH+ and PHOs to develop and provide cardiac rehabilitation services for Pacific fanau." *Counties Manukau District Health Board Annual Plan 2013/14*, under Cardiac Services, identifies that "Maaori & Pacific community cardiac rehabilitation services [are] developed and implemented" as a measure of health system success. Rehabilitation and support is included as an overarching activity.

The *Auckland District Health Board Annual Plan 2013/14* has a section on cardiovascular disease and the management of long term conditions with a focus on cardiovascular disease risk assessments. *The Pacific Health Action Plan; A Plan for the Health of Pacific People in Auckland District Health Board 2010-2014* is more broadly focused, identifying Priorities for Action including, "Improving management of chronic conditions among Pacific people" and "Enhancing health service access and responsiveness for Pacific people." There are no specific priorities in the Auckland plans related to Pacific people and cardiac rehabilitation initiatives; rehabilitation and support is included as an overarching activity.

The Evaluation

This evaluation project was made possible through funding from the Pacific Grant Fund. In June 2012, the SHORE and Whariki Research Centre was successful in a Request for Proposal from Pacific Perspectives Limited, to undertake an evaluation of three cardiac rehabilitation programmes offered within the Auckland region to determine best practice for cardiac rehabilitation programmes for Pacific peoples.

Evaluation team

The evaluation was co-led by Dr Lanuola Asiasiga (SHORE) and Dr Angela Moewaka Barnes (Whariki) who provided project management and support, engagement with providers, analyses of data and dissemination of findings. Associate Professor Helen Moewaka Barnes provided support and review as required. Victoria Lesatele (Whariki) was the main fieldworker organising data collection, recording interviews, managing the database, engaging with providers, undertaking analyses and dissemination. Alisi Katoatanga was sub-contracted to recruit and provide interpretation for interviews with Tongan participants. Regular evaluation meetings were held to update current work and issues and provide peer review support.

Aims and objectives

The overall purpose in conducting the evaluation was to improve health outcomes for Pacific peoples living with heart disease and reduce attributable morbidity and mortality for Pacific peoples. Specifically, the evaluation aimed to:

- Determine best practice for cardiac rehabilitation programmes for Pacific peoples.
- Collect and present evidence about outcomes arising from the approach to demonstrate what works for Pacific peoples so that successful practice can be applied across the health sector.

The evaluation objectives were to:

- Complete a process evaluation to document and describe the history of each programme, how they were developed and who was involved in the programme development.
- Complete an impact and outcome evaluation that will look at the effects of the service using short and intermediate term indicators developed in negotiation with the providers.

- Develop guidelines to assist health and disability service providers to establish similar services for Pacific peoples, with a particular focus on services delivered in the community.

Design and approach

The evaluation is a case study design which measures aspects of the three cardiac rehabilitation programmes. This includes a detailed, in-depth description and analysis of the programmes drawing on multiple sources of evidence (DePoy & Gitlin, 1994) that includes both qualitative and quantitative data.

The process evaluation documents and describes the history of the programmes, how they were developed and who was involved in the programme development. It also identifies programme reach and delivery, resources involved, strengths and weaknesses, and stakeholder's perceptions of the programmes.

The outcome evaluation documents and describes early outcomes of the programmes as presented in their respective programme logic models. It involves an examination of short and intermediate term indicators, developed in negotiation with the providers. Indicators of success were identified in relation to the programme and project goals and the strategies of each project, appropriate to their scope and timeframes.

Methods

The process and outcome evaluation involved:

- Observation of the cardiac rehabilitation programme.
- Interviews with key stakeholders including Pacific patients and their whanau.
- Focus groups with programme staff and management.
- Document review including programme materials and resources, programme monitoring reports, hospital admissions data and programme utilisation data.

The purpose of the observations of the cardiac rehabilitation programmes, interviews with key stakeholders, focus groups with programme providers and programme document review was to gain a better understanding of the way in which the cardiac rehabilitation programmes were implemented and outcomes were achieved.

Ethics approval was obtained from the Massey University Human Ethics Committee in October 2012. Locality agreements with the Auckland District Health Board and Counties Manukau District Health Board Research Offices were also obtained in December 2013

approving the evaluation to be undertaken within Auckland City Hospital and Middlemore Hospital respectively.

Observation

Prior to the commencement of interviews, the evaluator attended and participated in sessions that were part of the Auckland City Hospital and Middlemore Hospital cardiac rehabilitation programmes in order to gain an understanding of the programme content, design and delivery to assist in the interpretation of interview data. The evaluator also used these opportunities to recruit possible participants for the evaluation.

The Auckland City Hospital cardiac rehabilitation programme consists of four 2-hour weekly sessions, totalling 8 sessions. It is delivered in three localities across Auckland: Epsom, Lynfield and Glen Innes. The evaluator attended all of the eight sessions; five delivered in Glen Innes and the remaining three delivered in Epsom.

The Middlemore Hospital cardiac rehabilitation programme consists of three 2-hour weekly sessions comprising a total of 6 sessions. The evaluator attended the cardiac rehabilitation programmes in December 2012, February 2013 and April 2013 all of which were delivered in the Mangere Community Health Centre. The evaluator attended all of the six sessions.

Interviews

In-depth interviews were conducted with key stakeholders between January 2013 and July 2013. Three distinct groups of Pacific patients and their whanau were selected using the following criteria:

1. Pacific patients who, at the time of the interview, had attended the cardiac rehabilitation programmes within the past 18-24 months.
2. Pacific patients who were attending the cardiac rehabilitation programmes at the time of the interview.
3. Pacific patients who were referred to the cardiac rehabilitation programme but did not attend.

In total, 38 interviews were completed with Pacific patients. The interview guide focused on experiences and views of the relevant cardiac rehabilitation programmes.

The following tables present an overview of the interviews undertaken with each programme including ethnicity, gender and age demographics.

Table 1: Interviews with Pacific patients and their whanau

Programme	Past participants	Current participants	DNA	Total
Pacific healthy heart programme	7	7	5	**19**
Healthy heart programme	5	4	6	**15**
Manawa Ora programme	2	-	2	**4**
Total	**14**	**11**	**13**	**38**

Table 2: Pacific interviews by ethnicity and gender

	Gender		
Ethnicity	Male	Female	**Total**
Cook Islands Maori	3	1	**4**
Fijian	1	1	**2**
Niuean	3	1	**4**
Samoan	10	3	**13**
Tongan	12	3	**15**
Total	**29**	**9**	**38**

Focus groups

In 2013 focus groups were conducted with programme staff from each of the providers. The group interviews focused on staff experiences and views on the respective cardiac rehabilitation programmes.

Document review

A review of available programme documentation and information was undertaken to describe programme implementation and outcomes.

1. Auckland City Hospital (programme materials and resources, hospital utilisation data, Cardiac Rehabilitation service utilisation data)
2. Middlemore Hospital (programme materials and resources, conference abstracts, hospital admission data and Cardiac Rehabilitation service utilisation data)
3. Manawa Ora (programme materials and resources, service specifications, Ministry of Health quarterly monitoring reports January 2012 – January 2013)
4. Auckland and Counties Manukau District Health Board websites

Data analysis

Qualitative data analysis

All interviews and focus group discussions were recorded to ensure accuracy for the analysis process. Where possible, interviews were transcribed. As many of the interviews were conducted wholly or partly in Samoan and Tongan, it was decided that these would not be transcribed but that the evaluator would listen to the recordings several times. Thematic analysis was used to identify, analyse and report patterns and themes within the data (Braun & Clarke, 2006). Following this, the main fieldworker developed an initial framework highlighting the main themes; additional themes were identified during further analyses and write up phases. Summaries of the themes are reported in the findings sections with excerpts from the data used to illustrate the findings.

Quantitative data analysis

In order to determine referral to, uptake and completion of cardiac rehabilitation, providers sourced available data from their respective organisations to include in the evaluation. Data was collected for the evaluation period January, 01 2012 – January 01, 2013. The data included:

1. Auckland City Hospital admissions data
2. Auckland City Hospital Cardiac Rehabilitation Service utilisation data
3. Middlemore Hospital admissions data
4. Middlemore Hospital Cardiac Rehabilitation Service utilisation data
5. Manawa Ora Ministry of Health quarterly monitoring reports

Challenges and Limitations

A number of challenges arose during the evaluation that impacted on the ability to undertake the evaluation as planned.

Recruitment of interview participants

Recruitment of interview participants was an on-going challenge as the evaluation team was reliant on programme staff to undertake additional work, to contact potential participants, and gain their consent to forward contact details to the evaluation team. This caused considerable delays in the data collection phase. A variation to the Ethics Approval was sought in June to allow the evaluation team to make direct contact with potential interview participants.

Recruiting participants that did not attend the programme was particularly difficult. The evaluator was frequently unable to contact them on a home or mobile phone and some

phone lines were disconnected. Participants that did not attend the programme were also more likely to decline the invitation to be interviewed. One participant was not home when the evaluator visited for a scheduled interview and was unable to be contacted again to reschedule.

Interview numbers for the Pacific Healthy Heart Programme (Middlemore Hospital) and the Healthy Heart Programme (Auckland City Hospital) were sufficient to meet the evaluation requirements. However, only four out of an anticipated 9 interviews were conducted for the Manawa Ora programme because the programme team were only able to provide contact details for 8 potential participants. Two declined to participate, one participant could not be reached, and one participant was not home when the evaluator showed up for the interview and then could not be reached to reschedule. Because of the small number it is possible some experiences were not captured.

Focus groups with Pacific patients and their whanau

It was hoped that focus group interviews would be conducted with current programme attendees in the Healthy Heart Programme (Auckland City Hospital), and the Pacific Healthy Heart Programme (Middlemore Hospital) at the conclusion of the final programme session. This did not eventuate for two reasons.

1. There were no Pacific participants attending the Healthy Heart Programme during the data collection phase. There were however Pacific participants in the exercise class offered by the service. On the advice of one of the programme team members, the evaluation team agreed to interview these participants as it was unlikely Pacific participants would attend any later programmes.

2. Participants from the Pacific Healthy Heart Programme articulated their preference to be interviewed individually at another time rather than after a programme session. Several reported that they were too tired to participate at the end of the programme session. The evaluation team agreed to this and individual interviews were undertaken shortly after the completion of the programme.

Programme documentation and data collection

A lack of programme documentation in terms of reports containing rates of referral uptake, attendance and completion data of the programme for the Healthy Heart Programme and the Pacific Healthy Heart programme meant that raw data had to be accessed from a variety of hospital databases and this had to be manually checked and analysed by the evaluator. Data cannot always be accessed from a single hospital database. Issues arose with the accuracy of some of the datasets but these were clarified and new datasets were obtained. To double-check the accuracy of the data analysis, all analyses were sent back to the

programmes for review. Incomplete data in the Manawa Ora programme made ascertaining accurate numbers difficult.

Observational data

In the course of the interview, the evaluator observed patient behaviour that contradicted some of the information that was being shared. For example, hospitality, extended by the provision of food, by some participants was not always healthy, containing large amounts of fat for example. Although this was not explored further by the evaluator, it could imply that the information being received at the programmes was either not fully understood by the participants or changes were not made or maintained for a variety of reasons even though participants reported making healthy choices.

The evaluator also observed that participants were reluctant to criticise the programmes; this could impact on the type of the interview data that was obtained. Pacific politeness was also raised during an interview with a staff member who felt that Pacific patients might agree to attend a programme, even though they had no intention of doing so, to avoid insulting the staff member.

Interpreters

Many of the Tongan interviews were conducted only in Tongan and translated during the interview into English by the Tongan translator for the benefit of the Samoan interviewer. This would often make the interviews very long (1.5 - 2 hours). Also, there was the possibility that some of the nuances and meanings were lost in translation.

Completion rates

Definitions of completion rates varied across the programmes making it impossible to apply a universal definition. Therefore, the individual service definitions were applied to each case study.

Evaluation questions

Process Evaluation

1. What do the cardiac rehabilitation services consist of in practice?
2. What aspects of the programmes work well and what could be improved?
3. What are the key aspects that contribute to Pacific participation and completion of cardiac rehabilitation?

Outcome Evaluation

4. To what extent have the outcomes been achieved?

Findings

The evaluation findings are presented as case studies. Descriptive information is presented from interviews with Pacific patients and their whanau, focus groups with programme providers, observational data and quantitative data from each programme. These have been woven together to draw overall evaluative conclusions about each programme.

Case 1: The Pacific Healthy Heart Programme

This process and outcome evaluation is based on available programme documentation, observational data of programme sessions, interviews with Pacific patients and their whanau, notes from meetings, discussions and one focus group interview with programme staff.

Process evaluation

This section presents the process evaluation. It will begin by describing the programme aims and objectives, followed by a discussion of what the programme consists of in practice including: location and timing; programme resources and materials, referral processes; and programme eligibility. Programme reach is discussed using programme attendance data to determine Pacific peoples' uptake and completion of the programme. The section concludes with an examination of what aspects of the programme worked well, and what aspects of the programme could be improved.

Programme aims and objectives

The programme aim is:

- To empower Pacific peoples self-management skills following a heart event.

The objectives are:

1. To ensure Pacific people have access to evidence-based interventions, proven to prevent further cardiovascular events and improve quality of life.
2. To provide culturally and language specific information and skills to support their heart health.
3. To facilitate the patient's return to a full and active life by enabling the development of their own resources.

What does the cardiac rehabilitation programme consist of in practice?

Services available

The Middlemore Hospital Cardiac Rehabilitation Service offers a range of programmes for eligible patients following an acute coronary event. Known as the Healthy Heart Programme, participants are invited to participate in either a hospital-based, home-based or community-based programme.

Three hospital-based programmes are currently available: The Middlemore Hospital day programme has been running for approximately 15 years and is a six-week block course that patients attend for one hour during the week and business hours; the Manukau Super Clinic evening programme has been running since 2008 and is a three-week block course that patients attend for two hours during the week in the evening; the Pukekohe Hospital day programme has been running since 2006 and is a three-week block course that patients attend for two hours during the week and business hours. While the programmes vary in the format of the service, facilities and duration the sessions all provide information on a range of issues including: healthy eating; common emotions following a heart event; stress and exercise management; medication; and understanding heart disease. The programme involves multidisciplinary contributions from cardiac nurses, cardiac specialists, physiotherapists, health psychologists, pharmacists, and nutritionists.

Nurse-led clinics are also available for participants who would prefer one-on-one education, advice and support. Interpreters are available on request for these clinics. Participants also have the option of being referred to the Heart Guide Aotearoa home-based Cardiac Rehabilitation programme delivered by Te Hononga o Tamaki me Hoturoa. In addition, Middlemore Hospital offers an 8-week exercise programme that consists of two one-hour sessions per week. On completion of the exercise programme, participants are encouraged to continue exercise in the community through Green Prescription. For patients who require on-going support, an extra 8 – 12 week exercise support group is also available for one hour per week.

Programme History

In 2010, an internal audit of the attendance rates for cardiac rehabilitation programmes was undertaken by the Cardiac Nurse Specialist team. Findings indicated that, despite new initiatives developed to improve cardiac rehabilitation uptake, Pacific peoples remained the least likely to attend. In order to identify the barriers to access and attendance for Pacific patients, the cardiac rehabilitation team undertook consultations with the Middlemore

Pacific Cultural Resource Unit and primary healthcare providers, Lotumoui and the Heart Foundation as well as Pacific patients.

Areas of concern that were highlighted as impacting on Pacific people's uptake of cardiac rehabilitation programmes included: language barriers, accessibility issues such as transport, distance and travel time, affordability and cost issues, timing of sessions and the view that cardiac rehabilitation programmes were not working for Pacific people. Furthermore, engagement with Pacific patients and their families while they were in hospital and discussing the Pacific Cardiac Rehabilitation programme beforehand was seen as an important.

In collaboration with the Pacific Cultural Resource Unit, the Cardiac Nurse Specialist team used the information gained to develop the community-based Pacific Healthy Heart Programme. A marketing strategy was developed to increase Pacific patient knowledge and buy-in to cardiac rehabilitation. This included face-to-face contact by the Pacific Cultural Resource Unit and Cardiac Nurse Specialist with patients and their families while they were in hospital and the development of a DVD of Pacific patient's success stories and experiences with cardiac rehabilitation. The programme was first piloted in June 2011, and subsequently, a further two courses were held in Otara and Mangere.

Programme implementation

The programme is delivered by the Cardiac Nurse Specialist team based in Cardiology at Middlemore Hospital, with the support of the Pacific Cultural Resource Unit. The Cardiac Nurse Specialist team consists of four cardiac rehabilitation nurse specialists who are responsible for the design and delivery of all Phase I and Phase II cardiac rehabilitation programmes offered by Middlemore Hospital which include: three hospital based programmes; two hospital based exercise programmes; and risk clinics.

The programme consists of three 2-hour weekly sessions, comprising a total of 6 sessions. It is delivered at a community venue in Mangere, South Auckland. During the summer months, the programme is held in the evenings during the week, and in the winter months the programme is held in business hours during the week. Sessions are primarily educational; the programme is delivered in a group setting to a range of Pacific ethnicities. Generally the Pacific groups have included Samoa, Tonga, Niue and the Cook Islands. The Samoan group sessions are delivered in the Samoan language by the Samoan Cardiac Nurse Specialist. The Tongan group session is delivered by a Cardiac Nurse Specialist in English. Niue and Cook Islands participants are grouped together and receive the information sessions in the English language by a Cardiac Nurse Specialist. Members of the Pacific Cultural Resource Unit who are fluent in the Cook Islands and Niue language are also present to provide language

assistance if required. This group is also made available to any participants who would prefer to participate in English.

Health professionals with expertise in the health topics taught in each session are also brought in to deliver sessions as appropriate. The following table outlines the health topics delivered in the three workshops and who delivers it.

Counties Manukau District Health Board 3-week Pacific healthy heart workshop programme

Week 1	**Opening Prayer** **Welcome and Introduction** • Understanding heart disease and risk factors (delivered by Cardiac Nurse Specialist) **Exercise component (delivered by community exercise consultant)** • Benefits of exercise (delivered by Cardiac Nurse Specialist)
Week 2	**Opening Prayer** **Welcome and Introduction** • Medication (delivered by pharmacist) **Exercise component (delivered by community exercise consultant)** • Stress management and common cardiac beliefs (delivered by Cardiac Nurse Specialist)
Week 3	**Opening Prayer** **Welcome and Introduction** • Healthy eating choices (delivered by Cardiac Nurse Specialist or community nutritionist) **Exercise component (delivered by community exercise consultant)** • Practical cooking demonstration (delivered by Cardiac Nurse Specialist)

Every programme session begins with a welcome from the Pacific Cardiac Nurse Specialist and an opening prayer, usually done by one of the participants. Following this, participants are given an overview of what the session will consist of, and then invited to break into their ethnic discussion groups. At the first session of the programme, participants are asked to introduce themselves and share their heart story with the group. Any new participants attending in subsequent weeks are also given the opportunity to introduce and share their story with the group.

At each programme session, a physical activity instructor from a local community group takes the participants through a 10-15 minute low impact exercise routine. This activity is designed to increase participants' motivation to take up exercise on a regular basis and demonstrates the different ways they can exercise at their own level and gradually build fitness.

As part of the healthy eating component of the programme, there is a hands-on cooking demonstration designed to teach healthy cooking techniques. Participants are shown how to prepare common 'Pacific' food such as corned beef and *povi masima* (salty meat) in healthier ways so that they can still enjoy their food. Participants are asked to volunteer to help prepare and cook the meal, and the group share the meal together while still receiving information from the programme team. There is also a label-reading exercise where participants are shown how to identify fat, sodium and sugar content in a range of foods.

Location and timing

Findings from an internal audit undertaken by Middlemore Hospital indicated that the majority of Pacific patients resided in the Mangere community. The programme was initially held in different locations across South Auckland (primarily the first three programmes) until the programme team were able to secure a permanent location at the Mangere Community Health Centre. The Centre is located within the Mangere Town Centre area with free parking available for programme participants.

The programme was piloted as a four-week programme offered once a week for 1.5 hours per session. Programme sessions were held in the evening after business hours. A number of factors contributed to a change of programme duration and timing. Findings from feedback gained after the pilot programme indicated that participants felt that a four week programme was too long and that it should be changed to three weeks with each session extended to two hours. Participants also felt that the timing of the programme was a challenge particularly during the winter months due to cold weather in the evening. As a result, during the winter, the programme is offered during the day and in the summer months offered in the evening. The programme team also agreed with these changes as the workloads on both the programme team and the Pacific Cultural Resource Unit were difficult to sustain particularly the evening programmes.

Programme resources and materials

A number of programme resources and materials are used in the education sessions to aid the delivery and understanding of the health topic being discussed. All participants are presented with an information booklet in their first session that includes printed material of each health topic sourced from the Heart Foundation. While in their groups, the Cardiac

Nurse Specialist takes them through the material, giving the participants the opportunity to ask questions about the content. Printed material contains explanations about each health topic and illustrations. Props such as an artificial heart and artery are also used to enable the Cardiac Nurse Specialist to provide more descriptive and visual information for participants. Participants are also taken through a label reading exercise to teach skills about reading and comparing fat, sodium and sugar content in a range of foods. Labelled packets and boxes of food include common breakfast foods, snacks, drinks, coconut cream, and noodles.

Referral

Referral pathways

Eligible Pacific participants can access the Pacific Healthy Heart Programme in a range of ways. During the week and business hours eligible Pacific patients are identified by the programme team through a Manager Report which collects patient data on all admissions into the Coronary Care Unit and Step-down Unit within the previous 24 hours. The programme team aim to see all eligible patients while they are in hospital to offer Phase I cardiac rehabilitation and discuss options for Phase II cardiac rehabilitation. During this discussion, they are invited to attend any of the available cardiac rehabilitation programmes. If the patient accepts the invitation to Phase II cardiac rehabilitation it is noted by the programme team; the patient receives a formal invitation to the agreed programme when they are discharged from the hospital. To ensure staff have seen all eligible patients, the programme team check their records against the PREDICT database records.

Patients who present during the weekend and are in need of emergency cardiac procedures are taken to Auckland City Hospital for treatment and will usually be offered Phase I cardiac rehabilitation there. On discharge from Auckland City Hospital, Middlemore Hospital receives the discharge papers and the programme team follow up these patients with a phone call and discuss their Phase II cardiac rehabilitation options. Patients admitted to the Coronary Care Unit or Step-down Unit in the weekend and discharged during the weekend are followed up with a phone call in order to be assessed. Phase II cardiac rehabilitation options will be offered to patients at the follow-up clinic appointment.

Patients who had cardiac procedures at private hospitals, those who were referred from other District Health Boards and those who had their condition medically managed can also be referred to the programme. Pacific patients accessing any of the cardiology services offered by Counties Manukau District Health Board, such as the Heart Valve or Chest Pain clinics can also be referred to the programme.

Eligibility

The target population are eligible Pacific Counties Manukau District Health Board residents who have been admitted to the Coronary Care Unit or Step-down Unit at Middlemore Hospital. Pacific ethnic groups include: Samoan; Tongan; Niuean; Cook Islands; and Tokelau. Congruent with the Cardiac Rehabilitation Guidelines, eligibility is defined as: patients who have had an acute coronary syndrome (acute myocardial infarction/unstable angina) or have stable angina; patients who have undergone cardiac surgery such as coronary artery bypass surgery, valve replacement, or coronary artery angioplasty. In 2004, with the introduction of the PREDICT database, the Middlemore Hospital cardiac rehabilitation services made changes to the eligibility criteria to include any Pacific patient who according to the PREDICT criteria have a cardiovascular disease risk that is clinically high (15 or greater). However, for the purpose of this evaluation, data has been obtained for all eligible Pacific patients in accordance with the eligibility criteria set out in the New Zealand Cardiac Rehabilitation Guidelines.

Patients are screened to determine whether they are suitable for cardiac rehabilitation. Patients who have a cognitive impairment; patients who are in palliative care; and patients with congenital heart disease are deemed unsuitable for cardiac rehabilitation and are not offered the service.

What are the key aspects that contribute to Pacific participation and completion of the programme?

Programme Reach

The purpose of this section is to determine whether the programme is reaching its target audience. Congruent with the eligibility criteria, data pertaining to Fijian/Indian patients has not been included in this analysis.

Eligible patients

According to the PREDICT database, there were 759 patients in total admitted to the Coronary Care Unit or Step-down Unit with a cardiac rehabilitation primary diagnosis of Acute Coronary Syndrome in the 2012 calendar. Of these patients, 112 (15%) were Pacific. Samoan patients made up the majority of Pacific patients (41%) followed by: Tongan (26%); Cook Island Maori (16%); Niuean (8%); Other Pacific/Pacific not further defined (6%); and Tokelau (2%). Over half of all Pacific patients presenting to the Coronary Care Unit/Step-down Unit were male (60%) and almost half (49%) of all Pacific patients were less than 60 years old. Forty-eight percent of Pacific males were less than 60 years old, compared with 38% of Pacific females.

Pacific patient referral

Of the 112 Pacific patients admitted to the Coronary Care Unit/Step-down Unit in the 2012 calendar year, 79 accepted an invitation to participate in cardiac rehabilitation. Discussions with the programme team and a review of the data show that the difference in numbers of patients eligible for referral (112) and those that were referred (79) are due to a number of reasons: 11 patients were not contacted by a Cardiac Nurse Specialist and were therefore missed referrals; 22 patients were deemed either unsuitable for cardiac rehabilitation or declined an invitation to participate in cardiac rehabilitation.

Of the 79 patients who accepted an invitation to cardiac rehabilitation, 59 patients were referred to the Pacific Healthy Heart programme. Samoan patients made up the majority of all Pacific patients referred to the programme (44%) followed by: Tongan (32%); Cook Islands Maori (12%); Niuean (5%); Other Pacific (5%); and Tokelau (2%). Three-quarters of all Pacific patients that accepted an invitation to the programme were male.

Programme attendance and completion

Almost half (49%) of all Pacific patients referred to the programme attended at least one programme session. Thirty percent of all patients referred to the programme only attended one or two programme sessions.

Nineteen percent of all patients referred to the programme completed all three sessions of the programme. Samoan patients (45%) made up the majority of patients that completed followed by Tongan (27%); Niuean (9%); Cook Islands Maori (9%); and Other Pacific (9%). Pacific females were more likely (20%) than Pacific males (18%) to complete all three programme sessions.

Fifty-one percent of all patients referred to the programme did not attend. Over half of all Samoan (54%) and Tongan (53%) patients referred to the programme did not attend. Over two-thirds of female patients referred to the programme did not attend the programme compared with male patients (45%).

Participation and completion issues

This section presents the findings from interview data of the perceived barriers and challenges that impact on participation, non-participation and completion.

Perception of need

Most non-participants felt that they did not need to attend rehabilitation because they already had the information they required. Several spoke about receiving all the information they needed about their heart condition in the hospital:

> *I know about my heart… and I do know about it they explained it to me when I was in the hospital… she [nurse] came over and we talked about it in Middlemore… she's a good lady we used to talk and we talked about it and we talked about the stent and the operation… [Taito, Samoan male non-participant]*

> *At the hospital they explained clearly to me before the treatment what I would go through and afterwards what I was expected to do… I understood clearly what they wanted me to do no need for an interpreter… they explained clearly to me what I should do like the importance to take my tablets, kind of exercise to do, eat healthy food and to see my GP straight away if I would have any chest pain or any pain… [Venusi, Tongan male non-participant]*

General Practitioners (GPs) were also spoken of as a useful source of information. Some participants received information from GPs or felt that they could approach them if needed.

> *I've got the list of the food, the diet I got it from my doctor… even if I don't walk I do all my chores at home, that's my exercise [Ropati, Samoan male non-participant]*

Prior knowledge through, for example, diabetes clinics or specialists also meant that some felt well informed, with no need to attend the programme:

> *When she told me in the hospital what's it about I know already because I have diabetes and I know that stuff… it just the same thing and I always have diabetes nurse come and we talk about the same thing so I'm OK… [Sione, Niue male non-participant]*

Moreover, some non-participants reported that they already knew about a lot of the information that was to be covered in the programme as they had family members with health conditions such as diabetes:

> *Both my parents are diabetic and so growing up I was always aware of the nutrition and exercise thing so even if I kept going to the programme I don't think I would have learned anything new… [Lesieli, Tongan female participant]*

Some non-participants commented that one reason they did not attend the programme was that they felt well:

> *After I got out of hospital I was so much better and I felt really well than before so I didn't need to go to the programme… not like before… I was going to the doctor tell him I want help and a heart check and then after when we get better we're not interested anymore but it's not till something happens that we're like oh please please help [laughs] [Teuila, Samoan female non-participant]*

One participant who only attended one programme session felt that the programme was irrelevant and unnecessary for her as she had not had a heart attack:

> *I don't really think it was aimed at me. When I got there, the people were like old enough to be my grandparents [laughs] and it looked like they had all had heart attacks but I had rheumatic fever. I don't really understand why I was there – I only went for one session and then I didn't even stay for the whole thing because like I said I don't know why I'm here you know, I don't know why I had to learn about stopping smoking cos I got sick just because I got sick… the older people seemed to like talking about the food thing though because it looked like they all had diabetes too… maybe if I stayed or went back there might have been things that were good for me but I didn't cos I just didn't think it was for people like me… [Tongan female, 26 years]*

Complexity of patient health issues

Several non-participants had multiple health conditions that impacted on their decision and ability to participate in or complete the programme. Some felt overwhelmed in terms of time, transport and energy with the number of specialist or clinical appointments that they had to attend and therefore had to prioritise these ahead of the programme:

> *I don't know how to drive and he's [husband] the driver he's only the driver and he has lots of appointments too with the doctors and he even has to go Super Clinic sometimes too and it's too much and cos I don't know if he's tired but he just does it all for me anyway so yeah but if I knew how to drive then yeah why not aye… so it depends on how the driver is feeling too… [Teuila, Samoan female non-participant]*

Feeling unwell as a result of other health conditions also impacted on non-participants' motivation and ability to participate in the programme:

> *You know I spend most of the day at home because I don't have the energy to go out and about. I'm always struggling to breathe and become breathless when I do too much so I just sit here in my lounge try and do little things and then sit down… do some more chores and sit down… if I had energy then I would go but yeah, I always feel like this [Ropati, Samoan male non-participant]*

Prioritisation of health

Participants who had attended the programme felt that participation and non-participation were attributable to the degree of value people placed on their lives and health:

> *I knew that it would be a learning situation to find out what would be a good thing for me to follow…those people (non-participants) don't want to live that's why they probably don't want to go… because they don't want to live because they don't values their life… [Loni, Tongan male participant]*

Low prioritisation of health was also reported by a few participants as a barrier to attending the programme:

> *There's lots of reasons that people might not go. They might be thinking they would leave it to another time, maybe later on they will go… people that go want to go because they value their health… [Titiona, Samoan male participant]*

Participants reported that having gone through the experience of a heart attack or surgery motivated them to attend the programme so that they could learn how to take care of themselves. Gaining knowledge and skills necessary to improve their lives was articulated by many participants as the main reason why they completed the programme:

> *I know it's for my own good, it's for my own health cos they will be talking about things about my heart and I can learn how to look after myself [Tupou, Tongan female participant]*

Some participants spoke directly of their desire to live for their family as the main motivator for attending the programme to learn how to improve their health:

> *I exercise on the cross-trainer for 5 kilometers three days a week… that's what I'm trying to do because I want to live a long life… I want to live longer for my children… [Simi, Samoan male participant]*

Time

A lack of time due to family, church and work commitments impacted on the ability of non-participants to attend the programme:

> *Lots of the time I am busy with things like Sunday school practicing and family responsibilities, I don't think I can go there cos it's too far anyway and if we go there we are always rushing back because we always have to pick up our grandchildren from school… [Teuila, Samoan female non-participant]*

I have to work every day so that is the main reason why I don't go to the programme… it's hard to get time off to go even for the two hours because I have to leave work early to go and then come back – yeah I just can't do that… [Venusi, Tongan male non-participant]

Some non-participants described how, after fulfilling family and work responsibilities, they were often too tired and had no energy to attend the programme:

You know it's hard to find the time now – there's always something that needs to be done either at home or at work. It's not that easy because when you finally get the chance to go these things you're just too tired… [Taito, Samoan male non-participant]

Transport

Transport was a barrier for non-participants preventing them from attending the programme, as they were often reliant on other people to transport them to and from the programme:

It's not like everyone knows how to drive… that's one thing and if the husband is working then who is going to take you if you need to go to appointments… it would be good to have transport supplied if needed – that could be one of the things to look at… they will say oh I forgot whatever but the truth is there was no car to take them… [Teuila, Samoan female non-participant]

Similarly, one participant reported that while she and her husband completed the programme, it was challenging to try to organise transport, family and work schedules:

Transport is an issue… for him, he can't go on a bus and I have to take a day off work to take him to the programme… I don't drive so we have to arrange with my daughter to take us if she is available and she has work too… It's OK but I'm not sure about if that is easy for other people to take time off work or to find a way or car to getting there… [Sina, Samoan female whanau member]

What aspects of the programme worked well?

This section presents the findings on the strengths of the programme.

Programme strengths

Community venue

Participants articulated that having the programme in the community was more convenient for them as it was easy to access. For some participants, it was close to home and so they found it easier to get to and from the programme:

> *Yeah it's good, just down the road not far from here… [Loni, Tongan male participant]*

A few participants who did not have transport found the venue easily accessible when using public transport:

> *I catch the bus there from here (Otara) but usually I get a ride from someone else that is there home… but even if I didn't I could just catch the bus back that's easy for me too… [Sekira, Cook Islands female participant]*

The availability of free parking was reported by many participants as helpful, particularly as hospital parking was expensive:

> *For some people money can be a problem like when I was at Middlemore some days we don't have enough money even seven dollars to pay for the parking… especially on Mondays so that can be one of the reasons why people can't make it… but it was good at Mangere because we didn't have to pay for the parking… [Titiona, Samoan male participant]*

Some participants commented that they felt more comfortable being in the community venue than they would have felt in the hospital:

> *It was better being held there [community hall] than in the hospital… better environment for everyone [Anaru, Cook Islands male participant]*

Pacific specific programme

Participants provided positive reports about being involved in a programme that was designed specifically for Pacific peoples; they felt more comfortable being around other Pacific people from similar backgrounds and health conditions:

> *The programme was good because there was the same kind of group of people with the same interests and the same kind of disease and it was good for us to get together… I was happy to go because when I stay at home I'm always thinking about my disease but when I was with them, we were happy together because we talk about it and know more about it… [Tupou, Tongan female participant]*

The level of comfort that people had in their group sessions was an important factor in allowing participants to connect with each other and to share and learn from their experiences:

> *You know from each other, you learn from other people how to get better… I liked learning about my medication they explained it all very well… the cooking demonstration was really good because I can see how to make food that is better and healthy… [Tavita, Samoan male participant]*

The information shared between participants included personal experiences about the lifestyles they used to have, their heart conditions and the strategies they employed to try to implement healthy changes. This was viewed as a positive aspect because participants were able to reflect on their own behaviour and learn new strategies for change:

> *The programme drives you… it motivates you to move forward and enjoy the life because … what I mean when you go you share with this person and others share too and you get more experience and knowledge about medications and how to look after yourself and how to forget the lifestyles that you had and to try and change the past that you came from… it brings more ideas to you about and how to be careful with what I put in my mouth what I eat and what I drink… [Simi, Samoan male participant]*

Participants also articulated that having a Pacific nurse in the programme team was helpful as they felt more comfortable and at ease with her:

> *So she explained on every type of medicine and you know, so that was really good… and you know any info that we asked about you know… she was really helpful, and that really helped us so yeah, she was really, she was really good… and I think it's also nice having that info coming from an islander you know, it's also yeah with*
>
> *e felt more relaxed… [Hotepa, Cook Islands female whanau member participant]*

Relationship building

The programme team take time out at the beginning of sessions to allow group participants to introduce themselves and share their heart story with the group. This practice enabled participants to make connections with each other, and was a useful tool for building rapport between programme participants so that they were comfortable to engage in the discussion and information sharing:

> *He enjoys it, he mingles and has chats, conversations with other people there… with people he hasn't met and they share about their village and so forth… and sometimes it's good, there are other people you don't know and then you find out*

that you're related and it's really good because they encourage each other to do more to help themselves… and they share what they've done they make themselves getting to this far from when they first you know got this sickness and so forth… and the medication, want to know what they're taking… you know share, those people they share their story of what they do themselves… that make themselves you know give them that improvement and so forth… so yeah that's what has been going on in that class and I was happy… [Ane, Samoan female whanau member participant]

Participants reported that the social aspect of the programme enabled them to feel comfortable with sharing ideas and learning from each other:

I share with them what I cook they share how they cook… and we tell jokes too for those people who have been sitting at home like the old men, they share their opinion and they share some jokes – it is so nice…that's the best medicine is laughter… [Simi, Samoan male participant]

Programme content

Participants spoke positively about the information they gained from the programme. Many participants reported that they were not aware of many of the risk factors that contributed to their heart condition and found this information very beneficial:

To me I like this programme you know it would be good to go to the churches you know because our people don't really understand the things about what makes your heart sick or better and to help our people… some people might think it's a waste but it's not you know it's for your own future it's you know we won't be here all the time, one day we will be gone so it's good to know what is good for their life now… us Pacific aye to go into it and learn more about it which we never heard about it… to me I never heard anything about it… you know it's good, I really like it to learn more about it… [Sekira, Cook Island female participant]

Participants also found information about what they could do to take better care of themselves informative and useful, particularly in relation to nutrition:

The programme is good because we know about food now… because Pacific people they just enjoy eating without thinking about the consequences like if they have food they just eat… but when you take up the programme you know of what to eat and what not to eat… [Paea, Tongan male participant]

They explain everything for example food that is useful for him and his condition… and I understand that there are different types of food that can be either good or bad for you… the reason why I believe that now is because my husband has lost lots of weight that's why I know that if I put an effort into preparing the right types of

food it is good for him… the foods that have high fat, the foods that have high sugar we learned all of that stuff from the programme… [Sina, Samoan female whanau member]

Most participants did not have a very good understanding of their medication prior to the programme; learning more about this increased their knowledge and decreased anxiety:

The best thing that I thought about the programme is to understand what you are taking with the medications – before I used to be so worried about what I was taking – I would just open it and drink… there's not enough time at the doctors, remember they just give you the prescription and say bye without any explanation… that's the good thing I learned from there… and the way that they teach it, you take in all your medication and the nurse goes through everyone's medicine so they can ask questions and even if your medicine is different you can still learn about the other ones out there… it was good to learn that this one is to thin your blood, this one is for your BP yeah it was really good, I wish I had taken mine but I forgot them that day but I listened to it all and I knew if they were the same as mine… [Titiona, Samoan male]

Delivery of information

The delivery of the programme in the ethnic group they belonged to was reported by participants as a major strength of the programme. It allowed the information to be delivered to them in their language and enabled them to understand the content of the material:

It was good because she spoke in English and Samoan... some of the stuff that she was talking about was quite difficult to understand but when she sees that we sort of don't understand something, she can go between the two languages…that was really good for me and my husband [Sina, female whanau member participant]

Understanding and comprehension were important for many participants who reported that they had difficult experiences in the hospital with understanding what they were being told by doctors and specialists:

The best thing for me was that it was in Samoan – there's lots of English words that I don't understand, it's OK for you guys because you were brought up and schooled in NZ but because it was translated all by [nurse] into Samoan I have such a better understanding about everything… right from the heart and what goes on inside the heart to the food that we eat and how to take care of ourselves that way to even the causes of the problem and symptoms if anything else were to happen… that was the most important thing for me, that was the biggest benefit is that we now understand because it was in our own language… it's true we do understand what the Palagi

doctors are talking about but the understanding is not complete – that was the best thing about the programme [Penina, Samoan female whanau member]

Having the information delivered in their first language helped participants feel more comfortable and able to engage in discussions and ask questions:

It's good to do in groups when there are a lot of different islands… like for the Samoan group, because we can have more understanding the older people aye… cos for example if they're just going and going and there might be some words you don't understand but because it is in Samoan you can ask what some of the English words mean… it's very useful for people like me who have had this happen to learn about how to take it easy and heal, exercise, eat good food and take care of myself… [Titiona, Samoan male participant]

Participants who were proficient in the English language also spoke positively of the way in which information was delivered. Participants articulated the ease with which they were able to understand the material because they felt that it was delivered at an appropriate level of understanding and in a way that would allow them to ask for clarification if needed:

It's important to understand what people are talking about… in the programme if I didn't know I would just say could you explain what's that again and she did… yeah and I was like oh ok, ok… I don't understand but when they put it in simple words English aye for us island people to understand… so long as they explain in some, some simple words for me to understand and for me to talk back… cos in the hospital I couldn't understand much about that thing what you call it the stents, what's the kind of thing they put it in… is it for when my heart doesn't work?... you know the doctor he just go and go and then when I'm ask what's that, they just go and go again but I still don't understand… [Sekira, Cook Islands female participant]

Yeah the information was really good… especially for the first session we went to because it was about medicine… we could ask questions and because there were just three of us… it was put into simple lay man's terms… so you can understand what she was talking about… yeah we had really good talks about medicine and that… [Anaru, Cook Island male participant]

Participants appreciated how the programme team suggested making small changes over time rather than expecting them to make major changes. This approach was empowering and achievable for the participants:

I like a bit of fat too when I eat my pork, honest I do… I can't eat it just meat I don't like it I can't enjoy… but they [programme team] say just not all the time and to make sure I have a lot of veges… and I do that now, I don't eat pork much before

maybe two three times a week but now because I know I have to stop eating the fattening, I only have it maybe once every two weeks and then I eat some fat but just not much… I'm a person for veges though so I can do that one easy… [Sekira, Cook Island female participant]

Participants also felt that the programme team delivered the information in a non-judgemental way, which they felt was empowering and motivated them to maintain the changes they were making:

I told her there was some things I still hadn't changed like smoking but she said even if I cut down and keep cutting down until I am ready to stop that's better… I really like that because you know they understand how hard it is and they don't say I'm bad or I don't try because I do try… it's hard, it's hard because you've done it for so long… [Titiona, Samoan male participant]

Throughout the group sessions, the programme team actively promoted discussion and contributions from group participants by continually giving them the opportunity to share experiences about particular health topics. This practice not only allowed participants to engage more in the discussion and learning, but it also allowed the programme team to gain insights into participant understandings so they could then provide specific information on the issues raised when needed.

Visual props and hands-on demonstration

Participants spoke about the usefulness of visual presentations and props as a successful way for them to increase their understanding:

In the hospital when the doctor talking I didn't really understand, you know those things about what they do to me… but at the programme you know they talk more about, the people over there with heart problems you know I didn't even see the inside of the heart – at the programme they had an artificial one for us to look at it and I was like oh my poor heart… they showed me that there's two rooms in there one for the blood to come in and go out you know one on the left and one on the right… I think everyone needs to understand what is going on in the heart…the way they giving information was good because we could understand it, they showed us the heart they opened it the artificial heart and it makes us see… not just talking about it… it was good and all the parts you can see all the main arteries of how the blood… blood goes to all the parts of our bodies… [Sekira, Cook Island female participant]

Participants also felt that visual presentations and group activities were more interesting and increased engagement in the programme:

When people come through doing workshops or whatever… most, everything has to be visual… you got to have the board up and if you actually see something with your eyes… do a PowerPoint presentation and then everyone's like, oh OK… but if someone just stands there blah blah talking, everyone has that spaced out look… you just look around and everyone's like… half the people have just got close their eyes… and then they're like waste of time coming to this thing… yeah but if it's, if they can see it or… do a lot of little group activities was quite good… it was good to have hand-outs that you can go through together and it was good to have it in a group session, especially for me cos it was one-on-one… [Anaru, Cook Island male participant]

Hands-on cooking demonstrations were considered, a useful, practical way of learning how to prepare and cook healthy food. Participants liked the inclusion of common 'Pacific' foods such as tinned corned beef and *povi masima* as it showed healthier ways to cook and prepare foods that they enjoy:

I was the cook – there was beautiful kai and I was like look look it's just water, just water… but so tasty… we did corned beef and we did it in the microwave and then I emptied it out and drain the fat out, put in our chop suey and it was beautiful… good to know how we can eat our favourite food in a better way, you know there was only a little bit of meat but it was so good… [Puasau, Cook Island female whanau member]

Pacific Cultural Resource Unit

Discussions with programme staff emphasise the invaluable contribution of the Pacific Cultural Resource Unit. The programme staff have a clear understanding that language barriers have a major impact on their ability to build and maintain relationships with programme participants, recruit programme participants and the effective delivery of the education sessions. The involvement of the Pacific Cultural Resource Unit in the recruitment of participants both in the hospital and follow-up after discharge, the delivery of information in Pacific languages and transportation of programme participants has been instrumental in gaining participant engagement and attendance.

The Cardiac Nurse Specialist team work closely with the Pacific Cultural Resource Unit to ensure that they feel comfortable and confident with the information that they are helping to deliver to programme participants. One workshop was held to discuss the programme content and any issues or concerns the Pacific Cultural Resource Unit had with the information. There is also regular feedback from the Pacific Cultural Resource Unit regarding programme participants concerns and/or ideas about how to improve the programme.

Programme staff attributes

Participants spoke very positively about the approachability and helpful nature of the programme staff to ensure that they understood their heart condition and felt comfortable enough to ask questions:

> *[Nurse] explained everything… and she was always there, any questions that we had she always make sure we understand what is happening… she was so helpful and I can ask her for anything, if she wasn't there to help me I don't know what me and my wife would have done… [Sosene, Samoan male participant]*

A few participants also spoke about how programme staff would go out of their way to help, even if it was not directly related to their health:

> *[Name] is so good… she is so good, I was really worried because I wasn't sure how to get there [Auckland City Hospital for husband's bypass surgery] and then I didn't know where we were supposed to go once I got there, but [name] explained everything… she wrote everything down for me where to go, what to do and she was right… everything she wrote down was right [Penina, Samoan female whanau member]*

Whanau Support

Participants appreciated being able to take whanau to the sessions as it allowed them to also learn about heart health and how to make healthy lifestyle changes:

> *It was so important that my wife came because she does most of the cooking and so it was good for us both to learn about what we should be eating to stay well… [Sosene, Samoan male participant]*

Whanau support members also commented that the programme had given them the confidence and motivation to support their whanau member to make healthy changes:

> *Everyday I have to plan our food – especially for him… I always sit and wonder what I will make for him to eat, what will be good for him to eat… that's one thing I notice now is that I pay more attention to what I am preparing because I don't want him to get sick again… [Penina, Samoan female whanau member]*

Participants often commented that whilst it was relatively easy for them to make the initial lifestyle changes, maintaining lifestyle changes was often a challenge especially in the long-term. Whanau support was particularly helpful as it provided on-going encouragement and motivation to maintain lifestyle changes:

Like with my children, sometimes I want to have a fizzy drink instead of water they always remind me that it's not good for me and then get me a cold glass of water [laughs] [Titiona, Samoan male participant]

Participants who felt that they were not supported by their whanau found it difficult to implement or maintain lifestyle changes:

Three and a half days I was in hospital I was dying for a smoke and then I came home and stayed off cigarettes for five days, that's like a record for me and I thought yep I'm not gonna smoke anymore, but then the hard thing was my children and my wife they all smoke and it was so hard… I think that if they didn't smoke, I would never have picked it up again. They got angry at me when I picked it up again and I said to them they shouldn't be angry with me because they smoke outside and I can smell it and I have to walk past it all the time, it's really hard to do when everyone is smoking… [Simi, Samoan male participant]

One participant reported that she found it difficult to maintain lifestyle changes in her home environment, particularly in regards to nutrition:

Because I'm surrounded with you know they are not overweight like me and they eat what they want to eat… and I have to eat what they eat… you know where I'm coming from… you know when I have nurses come around and they say to me are you eating healthy and it's hard for me to tell the truth cos look at that… see that oil over there they're gonna tip all of that in the food… and Kara you know… they tell me especially me not to eat it but it's hard for me to sit there and watch them eat and I have to eat a bowl of vegetables… I've tried… yeah I try but you know… [Lesieli, Tongan female participant]

On-going refinement and development

Evaluation forms asking for participant feedback on the programme sessions are taken at the conclusion of every programme. Feedback is collated by the programme team and where possible changes are made to the programme. Notable changes that have been made since the inception of the programme have been: the inclusion of the exercise component in each programme session as patients felt it would be beneficial for them to actually see and experience the types of exercise being discussed; change from a four-week programme to a three-week programme as participants felt that four weeks was too long; evening programmes delivered during the summer months and day programmes delivered during the winter months as participants felt that the cold weather impeded their motivation to attend.

What aspects of the programme can be improved?

This section presents findings on the challenges of the programme.

Programme challenges

Length of programme

Participants felt that although the length of the programme was adequate in terms of learning the information, they would have liked on-going support or follow up to motivate them to maintain changes:

> *The hard thing is that you meet people and share with them and then you don't know what has happened to them, they might have died or stopped doing the right things again… no exercising, bad eating or stopped taking their medications things like that… you have to remind people so that they are supported [laughs] [Sosene, Samoan male participant]*

> *You can't just do one programme and then stop… that's why you go back to your old lifestyle… the problem is that it is only three weeks long and there is no follow-up support. People always feel motivated after the programme but as time goes by, they could forget the basics of what they should do or lose motivation so there needs to be some sort of support so that if this happens, they can receive the information again and get the encouragement and motivation from others again… [Simi, Samoan male participant]*

On-going structured activities for patients with heart conditions was articulated by many participants as necessary in their journey in making and maintaining healthy lifestyle changes:

> *At the moment there is no participation or activities that we can go to… for the group from the programme it would be good to form a group where we can get together and maybe keep up the stuff like exercising… the group is really good for socialising, for getting more information and learning, for exercising but it's for only three weeks… [Tupou, Tongan female participant]*

Programme resources

Financial and time constraints were identified by the programme team as on-going challenges. The Pacific Healthy Heart programme does not have specific funding or FTE allocated to it. Programme staff are responsible for the delivery of all Middlemore Hospital Phase I and Phase II cardiac rehabilitation programmes. They are also responsible for the

delivery of the out-patient risk assessment clinics and hospital-based exercise programmes. Moreover, in order to be accessible for Pacific participants who work, the programme also offers evening classes during the summer months which can be time intensive for the programme team and Pacific Cultural Resource Unit.

Financial constraints also impact on the ability of the programme team to access interpreter services to assist in their work with Pacific patients and whanau. Building relationships with patients has been identified as key to the engagement of Pacific peoples in the programme. Although the programme team has a Samoan nurse who is able to work with Samoan patients, they are heavily reliant on the assistance of members of the Pacific Cultural Resource Unit to provide language support with patients from other Pacific groups.

The involvement and assistance from the Pacific Cultural Resource Unit, while instrumental to the success of the programme, is voluntary and provided on top of their workloads which must be prioritised over the programme. This can impact on the programme in terms of their capacity to support the programme team in building relationships with Pacific patients, recruitment, follow-up support and explanation of information in the different Pacific languages. This was evidenced by low programme participation rates during a time when the Pacific Cultural Resource Unit was unavailable to assist in the programme.

There are also costs associated with the purchase of food for the hands-on cooking demonstration. As there is no funding available for these resources, the programme team purchase the food and get reimbursed at a later stage.

Data collection and programme documentation

Obtaining accurate data is challenging due to the multiple databases from which the data is sourced. A lack of programme documentation on referral to, uptake and completion has also been highlighted as a challenge. These challenges impact negatively on the ability of the programme team to monitor utilisation, programme effectiveness and highlight where there may be areas for improvement.

Programme linkages

The programme team articulated that although they have been trying to build the profile of the programme amongst primary care providers, it has been very challenging. One Pacific provider agreed to refer eligible Pacific patients from their practice to the programme, but to date no referrals have been received.

Process evaluation summary of key points

What are the key aspects that contribute to Pacific participation and completion of the programme?

Programme reach

- The majority (90%) of cardiac rehabilitation eligible Pacific patients that presented to the Coronary Care Unit/Step-down Unit during the 2012 calendar year were contacted by the Cardiac Nurse Specialist team.
- Almost half (49%) of all Pacific patients that were referred to the programme attended at least one programme session.
- Thirty percent of all patients referred to the programme did not complete all three programme sessions.
- Nineteen percent of all patients referred to the programme completed all three programme sessions.
- A large number of Pacific patients referred to the programme did not attend (51%).

Participation and completion issues

- Receiving adequate health information while in hospital, or the ability to access health information easily through their GP, other health services, or whanau members was articulated by many non-participants as contributing to their decision not to attend the programme.
- Some non-participants also reported that because they felt well after discharge they did not need to attend the programme. Conversely, some patients that had co-morbidities reported that feeling unwell as a result of their other illnesses impacted on their ability to attend the programme.
- A lack of time due to family, church and work commitments was also cited by many of the non-participants as reasons for not attending the programme. Patients with multiple co-morbidities also felt overwhelmed in terms of time, energy and costs of their various specialist or doctor appointments and prioritised these over the programme.
- A lack of transport to and from the programme was reported by both participants and non-participants as an issue to participation and completion of the programme.

What aspects of the programme work well?

Programme strengths

- Having a Pacific specific programme allowed participants to feel comfortable and engage in relationship building.
- The programme content was informative, relevant and useful and was delivered in a way that participants could easily understand. The opportunity to have the programme delivered in a variety of Pacific languages was also a strength identified by participants.
- Asking questions and listening to participant discussion on particular issues allowed programme staff to identify gaps in knowledge.
- Programme delivery via the use of visual props, hands-on cooking demonstrations and group discussions was a way to increase participant skills, interest and engagement.
- The community venue was convenient, easy to access and a more positive environment for programme participants than the hospital. The availability of free parking was a bonus.
- The involvement of the Pacific Cultural Resource Unit was essential in the recruitment, follow-up, explanation of information in the different Pacific languages, and transportation of programme participants.
- Approachability, the non-judgemental style and easy nature of programme staff increased participants' level of comfort and confidence to actively engage in the programme.
- Whanau support was necessary for participants to be able to make and maintain lifestyle changes and particularly motivational support in the long-term.
- On-going refinement and development through feedback forms allowed programme staff to tailor the programme to cater to the needs of Pacific peoples.
- Peer support and socialising were important; allowing participants to share their experiences with each other promotes engagement in the programme.

What aspects of the programme can be improved?

Programme challenges

- The programme duration did not meet the needs of most participants who wanted on-going support to assist them maintain change over time.
- Financial and time constraints have placed considerable strain on the ability of the programme team to deliver the programme.
- Consistent and comprehensive programme data collection and documentation needs to be implemented to ensure accuracy of information regarding programme reach, and to inform further programme development

Outcome evaluation findings

The following section presents the outcome evaluation findings. The following short-term outcomes are discussed: Pacific participants increase their knowledge and understanding of factors that influence their well-being; Pacific participants gain knowledge and skills to reduce risk factors; and Pacific participants are motivated to make lifestyle changes. Progress towards achieving the following medium term outcome: Pacific participants make lifestyle changes, is also discussed. It was not possible within the scope of this evaluation to determine whether long-term outcomes were met.

To what extent have the outcomes been achieved?

Short-term Outcomes

Increased knowledge and understanding of factors that influence well-being

Participants' knowledge and understanding of their heart condition had changed:

> *It was good to learn about all the arteries and when it doesn't work like my one, the blockage, they showed it to me too... I took my diagram over there too for me to understand what they're gonna tell me about the blockage on my heart… [Sekira, Cook Islands female participant]*

Participants recalled a variety of risk factors that contribute to heart disease. These included lack of exercise; smoking; obesity; high cholesterol; high blood pressure; diabetes; stress and eating unhealthy food:

> *You know one thing I learned that I didn't know was worry… us Samoan people we are always worried about family and money or work sometimes but mainly money… they [nurses] explained that worry is not good for us the blood pressure you know… I think that is a big thing for me is worry… but they explained to us that worry is not good for us and our blood pressure and our health… [Titiona, Samoan male participant]*

Increased knowledge and skills to reduce risk factors

The programme exposed participants to a variety of ways in which they can reduce their risk factors. They were previously not aware of the risk factors and reported that the ways to reduce risk seemed achievable and realistic. For many participants, simple changes like replacing dark blue milk with light blue or green milk was useful knowledge gained from the programme:

Even just the milk… we learned how to do things like changing dark blue to light blue and then green… I didn't even know that such a little thing like that helps, every little thing helps… our family used to drink the dark blue milk but now we have the green milk… [Penina, Samoan female whanau member]

Programme participants also learned to prepare food in different ways:

I really like the cooking that they do over there… of cooking of the same food that we are eating but it shows that it's healthy and cheaper and fill everything up with vegetables…[Loni, Tongan male participant]

They explained to us how fatty coconut cream is but they showed us different types with different levels of fat… they asked us what coconut cream we liked and I think we all said Kara [laughs] and they [programme team] explained that we can still have Kara but just mix it with a lot of water so there's not much fat... [Metua, Cook Island male participant]

Participants articulated ways in which they were able to increase physical activity in safe ways:

The thing I like about the programme is they know the level of exercise that we should be doing like for my husband when he first got out of hospital it was no lifting or stretching arms out and just little walks and then they said to increase it slowly... walk down to the mail box then the next week walk to the next door mail box and then keep going until he felt OK to do more… don't push yourself too hard because it takes time… [Penina, Samoan female whanau member]

For about a month we walked around the block all the way around… now we can go twice around the block and we do… [Metua, Cook Island male participant]

The programme increased participant knowledge about the different types of medication they were prescribed as well as their function and doses:

I told them [programme team] I don't know the use of all these pills… I've only got the diabetes one and one for my heart… they said I have to take it to make my blood thin aye – the aspirin… [Tavita, Samoan male participant]

Pacific participants are motivated to make healthy lifestyle changes

Most participants reported that they were motivated to try to make healthy lifestyle changes. Some felt that learning about their heart condition and risk factors provided the necessary motivation for them to make changes to improve and maintain good health:

There's a great change in my lifestyle because I'm very knowledgeable compared to the time that I came out of the hospital… I know more about what I need to do to keep myself going along with better health… [Tupou, Tongan female participant]

Other participants said that they were more inclined to think of the consequences of unhealthy lifestyle behaviours:

The programme makes you think you know, it makes you think twice… like for other people they just ignore their lifestyles and they eat this and they smoke that because they don't think twice about it… [Simi, Samoan male participant]

Some participants also reported that they found themselves thinking more about the different ways in which they could make healthy lifestyle changes, particularly in relation to nutrition and healthy eating:

I spend most of my time wondering what I am going to make for dinner that will be healthy for my husband and my family… [Penina, Samoan female whanau member]

Medium-term outcomes

Participants have made lifestyle changes

Participants described a range of lifestyle changes they made as a result of the programme. The main lifestyle changes were in relation to healthier eating habits and nutrition:

The change for me is the diet… so the changing food… I think I have exercise at work because I'm lifting heavy things and walking around all day so I think that's enough for me…the thing that I am changing is to remove all the fat from the meat and things like that… I am more conscious of eating fat because I'm Tongan – we like eating the pork with the skin when it's crispy it's nice but I'm not eating those things anymore… and also I'm taking the tablets…" Paea, Tongan male participant

Commonly, these changes occurred in the whole family.

One thing that is never missing from our table now is salad or vegetables… whatever vegetables that we can afford we buy and add to our cooking or food... sometimes if we are short with money then it's just a cucumber salad… but there's always a salad… [Simi, Samoan male participant]

Along with nutritional changes, participants also reported changes in multiple domains including smoking reduction and increased physical activity:

Yes I change it a lot – no more frying, this time just roast and cook with the water, boil with the water I mean… no more frying I cut it right off…I'm very stable in what they told me to do at the programme… I'm up to it… I do everything they say… exercise, I have my music on and I exercise in my house – they did say about exercise walk you know… yeah I do walk around you know, two weeks from my next door further down and I come back but now I walk around everywhere you know… [Sekira, Cook Islands female participant]

I'm walking now… before I used to just go to work and come back but no exercise… that changed now and I'm doing some exercise… but slowly, I'm walking… I used to smoke but now I'm not smoke… [Soane, Tongan male participant]

Two participants indicated that they smoked and consumed alcohol before their heart events. One of these participants (Soane) reported that they had stopped smoking and drinking. While the other participant articulated that they had not stopped smoking or drinking completely, they managed to reduce their tobacco and alcohol consumption:

I haven't stopped smoking and drinking completely but I have cut down – that's a good sign. I used to smoke two packs of cigarettes a day and drink every day… I can't sacrifice my drinking I know that. I can do the exercise and the food and cutting down the smoking… it's really hard for me at the moment to try and give up smoking and drinking completely, maybe one day but I'm so happy that I have cut down so much because before it was very bad… [Simi, Samoan male participant]

Maintaining lifestyle changes was reported by many participants as being an on-going challenge but that they were committed to maintaining these changes:

I learn a lot from the workshop, but it's only… you know I don't practice some of it… the knowledge is there but I am still working on putting everything into practice… the will power to continue… I know the healthy food that I'm supposed to eat but probably for one or two days and then after that I really want to go back you know and taste what I usually want to and then go back to healthy… but I practice it [healthy eating] but not for every day…sometimes I crave for something… just like exercise, there are days that I'm so energetic to go and there are days that I just can't myself up to go… but those types of days come and go, and I work hard to do the right things… [Loni, Tongan male participant]

While most participants reported that they had always taken their medication as prescribed, a few did not. All but one of these participants reported that, as a result of the programme, they now took medication as prescribed:

They described to me the different types of tablets and what they're for… I take care of making sure I take my tablets not like before I didn't take care of my tablets… [Paea, Tongan male participant]

Outcome evaluation summary of key points

To what extent have the outcomes been achieved?

Success in achieving intended short-term outcomes

Increased knowledge and understanding of factors that influence well-being

- Participants' knowledge and understanding of their heart condition has increased.
- Participants were knowledgeable about a variety of risk factors that contribute to heart disease.

Increased knowledge and skills to reduce risk factors

- Participants learned a variety of ways in which they can reduce their risk factors.
- Participants learned to prepare food in healthier ways.
- Participants reported an increase in their physical activity in safe and manageable ways.
- Participants learned more about their medications.

Motivation to make healthy lifestyle changes

- Most participants expressed motivation to try to make healthy lifestyle changes.
- Participants were more likely to think about the consequences of unhealthy lifestyle behaviours.
- Participants found themselves thinking about different ways they could make healthy lifestyle changes.

Progress towards medium-term outcomes

Participants have made lifestyle changes

- Participants reported that they implemented healthy eating choices and habits.
- All but one participant reported that took their medications as prescribed.
- Skills learned from the programme were translated to the home environment and participants prepared and cooked food in healthier ways.

- Two participants reported that they smoked or consumed alcohol before their heart event. One stopped and the other indicated that he cut down on smoking and alcohol consumption.
- Some participants commented on the challenges to maintain lifestyle changes in the long-term.

Concluding comments

Findings indicate that Pacific participants who completed the programme: were engaged by the programme; gained knowledge about the factors that influence their wellbeing and heart health; showed motivation to change; and made positive lifestyle changes as a result of the programme.

Participants' knowledge and understanding of their heart condition increased. Participants were able to recall a variety of risk factors that contributed to heart disease and gained knowledge and skills to reduce their risk factors. Most participants expressed motivation to try to make healthy lifestyle changes. They were more likely to think of the consequences of unhealthy lifestyle behaviors and thought of different ways to implement healthy changes. The programme extended to the home environment where participants reported making healthier food choices, preparing and cooking food in healthier ways, and increasing their levels of physical activity. All but one participant took medication as prescribed.

Major strengths of the programme include: programme delivery in the Pacific languages; the use of information and skills at a level that was appropriate for the participants; the use of group discussions that incorporated visual presentations and hands-on demonstrations; the accessibility of the programme; and programme staff attributes. The level of comfort experienced by participants was a result of the relationship building efforts of the programme staff, being part of a specific Pacific group, and the promotion and valuing of their experiences throughout the programme.

Challenges around programme reach were identified: 19% of Pacific patients referred to the programme completed it; 30% of Pacific patients attended at least one programme session but did not complete; and 51% of Pacific patients referred to the programme did not attend. Factors that could impede on participation and completion have been highlighted in the process evaluation. These include: perception of need; complexity of health issues; transport; time; location; and returning to work. A number of programme implementation challenges were highlighted: these are limited programme resources to support the delivery of the programme and accurate systematic collection and documentation of programme referral, uptake and completion data to monitor performance.

Case 2: Healthy Heart Programme

This process and outcome evaluation is based on available programme documentation, observational data of programme sessions, interviews with Pacific patients and their whanau, notes from meetings, discussions and one focus group interview with programme staff.

Process Evaluation

This section presents the process evaluation. It begins by describing the programme aims and objectives, followed by a discussion of what the programme consists of in practice including: location and timing; programme resources and materials, referral processes; and programme eligibility. Programme reach is discussed using programme attendance data to determine Pacific peoples' uptake and completion of the programme. The section concludes with an examination of what aspects of the programme worked well, and what aspects of the programme could be improved.

Programme aims and objectives

The programme aims and objectives are:

- To prevent further cardiovascular events by empowering patients to initiate and maintain lifestyle changes.
- To improve quality of life through the identification and treatment of psychological distress.
- To facilitate the patient's return to a full and active life by enabling the development of their own resources.

What does the cardiac rehabilitation programme consist of in practice?

Services available

Auckland District Health Board residents who have had a cardiac event or cardiac surgery currently have three options for Phase II cardiac rehabilitation available to them:

1. Auckland District Health Board Cardiac Rehabilitation Services

2. Te Hononga o Tamaki me Hoturoa Cardiac Rehabilitation Service
3. The University of Auckland Cardiac Rehabilitation Service

Auckland District Health Board Cardiac Rehabilitation Services

Phase I cardiac rehabilitation is offered to eligible cardiac rehabilitation patients while they are in hospital during an inpatient stay. Following discharge, patients are offered a follow-up individual cardiac rehabilitation appointment at a post-discharge Cardiac Rehabilitation Nurse Specialist Outpatient Clinic. At this appointment, patients are given the opportunity to discuss their health condition with the nurse including health needs and concerns. The Cardiac Rehabilitation Nurse Specialist also discusses risk factors and goal setting with the patient and their whanau. Interpreter services are available if required. The Cardiac Rehabilitation Nurse Specialist also uses this opportunity to discuss the best options for Phase II cardiac rehabilitation suited to the patient's particular needs.

The following section provides a summary of the Phase II cardiac rehabilitation programmes that are available for participants to choose from. All services apart from the University of Auckland Cardiac Rehabilitation Service are free of charge for patients living within the Auckland District Health Board area:

1. The Healthy Heart Workshops. This is a 4-week community education programme held in Epsom, Glen Innes and Lynfield. The workshops are facilitated by the Cardiac Rehabilitation Nurse Specialist team and include education sessions delivered by a range of health professionals.
2. Exercise Programme. This is an 8-week community exercise programme facilitated by a member of the Cardiac Rehabilitation Nurse Specialist team at the Greenlane Clinical Centre Gymnasium.
3. Chinese Language group. This is a two-hour session held monthly depending on demand at the Greenlane Medical Centre. An interpreter fluent in both Cantonese and Mandarin provides language assistance.
4. Waiheke Island Residents Heart Guide Aotearoa is a home-based cardiac rehabilitation programme available for Waiheke Island residents. It is delivered in partnership with the Waiheke Health Trust.
5. The Healthy Heart Workshops Evening Programme. This is a 3-week community education programme that is held four times a year in the Epsom locality.
6. Auckland City Hospital Pacific Health Programmes. Pacific patients can also be referred to any of the services that are offered by the Pacific Health Services of Auckland City Hospital.

7. Pacific Heart Foundation. Pacific patients can also be referred to the Nutrition Cooking Course offered by Pacific Heartbeat.

Additionally, patients can also be referred to the following services:

1. Te Hononga o Tamaki me Hoturoa Cardiac Rehabilitation Service. This service is offered to Maori and other people living within Auckland City quintile five areas of the New Zealand Deprivation Index. It is a home-based cardiac rehabilitation service that is based on the New Zealand guidelines for Phase II rehabilitation and incorporates aspects of the Heart Guide Aotearoa and Whanau Ora
2. The University of Auckland Cardiac Rehabilitation Service provides a 12-week training programme and a long term maintenance programme for people who have had a cardiac event or surgery as well as patients who are at risk of developing heart disease. There are costs associated with this service that are charged to the patient.

Note: As a result of discussions with the programme team about the evaluation findings, a new programme for Pacific patients is currently in development and is expected to be delivered in 2014.

Programme history

The focus of this evaluation is on the Phase II cardiac rehabilitation community education workshops. Known as the Healthy Heart Workshops (the programme), the programme is a generic Phase II cardiac rehabilitation programme offered to patients who have suffered an acute coronary event or a diagnosis of coronary artery disease.

Discussions with the programme staff indicate that the programme has been running for more than 15 years. It was first delivered at the Heart Foundation by a Cardiac Rehabilitation Nurse Specialist but as numbers began to increase, they moved to the Epsom locality. In 2005, the programme was also offered at Auckland City Hospital for three years (the Epsom programme continued throughout this time) but was abandoned when the numbers began to drop. The programme team thought that this was due to parking costs being introduced at the hospital and also increased traffic that prevented people from easily accessing the programme. The Glen Innes and Lynfield programmes were introduced in 2010.

Programme implementation

The programme is delivered by the Cardiac Rehabilitation Nurse Specialist team based within the Cardiology services at Auckland City Hospital, alongside a multidisciplinary team

that includes a psychologist, dietician, pharmacist, cardiologist, social worker and physiotherapist. A total of 3.8 FTE is allocated to the service, and the programme team consists of five cardiac rehabilitation nurse specialists who are responsible for the design and delivery of all Phase I and Phase II cardiac rehabilitation programmes offered by the Auckland District Health Board Cardiac Rehabilitation Service.

The programme is delivered primarily using the presentation style of teaching and is facilitated by a member of the programme team. Health professionals with expertise in the health topics taught in each session are also brought in to deliver sessions as appropriate. The following table outlines the health topics delivered in the four workshops and who delivers it.

Auckland District Health Board four-week healthy heart workshop programme

Week 1	**Nurses Welcome and Introduction** **Risk Factors (delivered by Cardiac Rehabilitation Nurse Specialist)** • Overview of your heart • Risk management **Refreshments** **Living positively following a cardiac event (delivered by Health Psychologist)** • Monitoring your goals • Breathing exercises
Week 2	**Exercise for heart health and future (delivered by Cardiac Rehabilitation Nurse Specialist or Physiotherapist)** • Exercising safely • Options for exercise **Refreshments** **Medications (delivered by local pharmacist)** • The benefits of heart medication **Breathing exercises**
Week 3	**Healthy eating for your heart (delivered by nutritionist)** • What is good nutrition for a healthy heart? • Practical hints for a low fat dietary lifestyle **Refreshments** **Supermarket Tour**
Week 4	**CPR (delivered by Cardiac Rehabilitation Nurse Specialist)** **Meet the cardiologist (delivered by Auckland City Hospital cardiologist)** • Your questions on heart disease answered

Each workshop begins with a welcome from a member of the programme team and an overview of the session. This is followed by the delivery of the health education topic which concludes with an opportunity for participants to ask questions. At the conclusion of each weekly session, a member of the programme team takes the class through different breathing exercises designed to teach relaxation techniques for stress management.

As part of the *Healthy Eating for your Heart* session, there is a label reading exercise designed to increase participants' skills to identify fat, sugar and sodium content in food. To put these skills into action, the healthy eating component also includes a trip to the local supermarket. During this exercise participants are given the opportunity to examine the fat, sugar and sodium contents of different foods they would normally buy and identify which foods are healthier options. Nutritional information and hints for healthy eating are also provided by the programme team member throughout the supermarket tour.

During the first workshop session a group activity designed to gauge participants' understanding of heart disease is undertaken. The final workshop session consists of a hands-on learning demonstration to teach programme participants skills in cardiopulmonary resuscitation (CPR), and an opportunity for participants to ask a cardiologist any questions they may have related to their heart condition or heart health.

Location and timing

The programme consists of four-weekly workshops. They are delivered at a community venue in three localities within the Auckland District Health Board area during the week between 10am – 12.30pm.

1. St Andrew's Anglican Church Hall, Epsom.
2. Lynfield Recreation and Youth Centre, Lynfield.
3. AMI Netball Centre, Glen Innes (now delivered at UniSports Complex, Glen Innes).

Free parking is available at all venues for programme participants. In order to cater for patients who may not be able to attend the day programmes, an evening programme is also held three times a year at the Epsom locality.

Programme resources and materials

A number of programme resources and materials are used in the workshops to aid in the delivery and understanding of the health topic being discussed. During Phase I cardiac rehabilitation, patients are given information booklets sourced from the Heart Foundation that has information on their heart condition, exercise and nutrition. At the clinic appointments, all patients are given a personal booklet to guide them through the cardiac

rehabilitation programme. This booklet includes sections for participants to complete either on their own or with the aid of a programme team member. It includes a health record for participants to fill in, goal setting and plans of action to recover from their cardiac event. Summaries of key points from the stress management, nutrition, medications, and exercise and CPR workshops are also included in the booklet.

Other programme resources include packets and boxes of common breakfast foods, snacks and drinks which are used as learning tools for the 'label reading' exercise in the healthy eating component of the programme. A 'Fat Kit' is also used during the nutrition session that consists of beakers full of fat alongside a photograph of a meal to demonstrate fat content. CPR dummies and Automated Electronic Defibrillation's are also used to teach programme participants CPR skills. An ice-breaker group exercise is undertaken in the first workshop to help participants build rapport with others in the group. This exercise is also designed to allow participants to think about the risk factors that contribute to heart disease. For the most part, the workshop sessions are delivered using PowerPoint presentations.

Referral

Referral Pathways

Auckland District Health Board resident patients that are eligible for cardiac rehabilitation can access the services through a range of ways. During the week and business hours, the Cardiac Rehabilitation Nurse Specialist team makes daily rounds of the cardiac inpatient wards, coronary care unit and day stay cardiology unit specifically to identify patients and provide Phase I cardiac rehabilitation. If any patients are missed during the daily ward visit, nurses from the coronary care unit and cardiology wards will refer them to the cardiac rehabilitation service.

Additionally, all patients who have received Coronary Artery Bypass Graft or valve surgery in the cardiothoracic surgical ward are automatically referred to the service by the ward nurses. Angiography patient lists are regularly checked by the programme team to ensure that they have identified all eligible cardiac rehabilitation patients. Discussions with the programme team indicate that they believe they reach the majority (over 90%) of cardiac rehabilitation eligible patients.

Auckland District Health Board residents who have had cardiac procedures at private hospitals such as Mercy and Ascot can also be referred to Phase II cardiac rehabilitation. Although relatively rare, self-referrals and referrals from the primary health care sector are also possible.

Eligibility

The target population are cardiac rehabilitation eligible Auckland District Health Board residents who have been admitted to the Coronary Care Unit, Step-down Unit, cardiology ward, cardiology day-stay ward and the cardiothoracic surgical ward. Congruent with the Cardiac Rehabilitation Guidelines, eligibility is defined as those patients who have had an acute coronary syndrome (acute myocardial infarction/unstable angina) or have stable angina; patients who have undergone cardiac surgery such as coronary artery bypass surgery, valve replacement, or coronary artery angioplasty.

Patients are screened in the first instance by the Cardiac Rehabilitation Nurse Specialist to determine whether or not they are appropriate for cardiac rehabilitation. Patients that are deemed not appropriate include: patients with a cognitive-impairment; patients who are in palliative care; patients with severe co-morbidities; and patients who are in rest homes.

What are the key aspects that contribute to Pacific participation and completion of the programme?

Programme Reach

The purpose of this section is to determine whether the programme is reaching Pacific patients. It will begin by giving an outline of how many Pacific cardiac rehabilitation eligible patients in total came through cardiology and cardiothoracic services. This will be followed by a discussion on how many of the Pacific cardiac rehabilitation eligible patients were referred to the programme and will conclude with an analysis of programme attendance and completion.

Eligible Patients

In the 2012 calendar year, a total of 811 cardiac rehabilitation eligible patients came through the cardiology and cardiothoracic wards. Of these patients, 95 (12%) were Pacific. Samoan patients made up the majority (37%) followed by: Tongan (25%); Fijian (20%); Niuean (11%); Cook Island Maori (4%); Other Pacific Islands (2%); and Pacific Islander Not Further Defined (1%). Over two-thirds (68%) of all cardiac rehabilitation eligible Pacific patients were male. Over half (54%) of all cardiac rehabilitation eligible patients were less than 60 years old. Similarly, over half (57%) of all cardiac rehabilitation eligible Pacific male patients were less than 60 years old, compared with all cardiac rehabilitation eligible Pacific female patients (47%).

Pacific patient referral

A total of 47 Pacific patients were contacted by the service during 2012 and accepted an invitation to the programme. Discussions with the programme team indicated that the difference in numbers of patients eligible for referral (95) and those that were referred (47) was due to Pacific patients choosing another programme or deemed not appropriate for cardiac rehabilitation due to the reasons mentioned earlier.

Almost two-thirds of referred patients were male (62%) and 38% were female. The majority of Pacific patients were Samoan who constituted almost half (47%) of all Pacific patients referred followed by: Tongan patients (30%); Niuean (11%); Fijian (11%) and Tuvalu (2%). Over half (59%) of male Pacific patients were under 60 years old compared with female Pacific patients (28%) under 60 years old.

Programme attendance and completion

Almost three quarters (74%) of all Pacific patients that were referred to clinic attended. Fijian patients were the most likely to attend (100%) followed by Tongan (78%), Samoan (72%) and Niuean (60%) patients. Pacific males were more likely (82%) than Pacific females (61%) to attend clinic. Non-participants of the cardiac rehabilitation programme did attend clinic so clinic was viewed as important.

Of the 47 Pacific patients that were referred to the programme 23% attended at least one workshop. Nine percent attended at least one programme session but did not complete. Fifteen percent completed the programme. Fijian patients were most likely to complete the programme (80%). Male participants were more likely (17%) than female participants (11%) to attend the programme.

Seventy-six percent of all Pacific patients referred to the programme did not attend. Tongan patients were the most likely to not attend any workshops (93%) followed by: Niuean (80%); Samoan (77%); and Fijian (20%). Female patients were also more likely to not attend any workshops (83%) compared to male patients (72%).

Participation and completion issues

This section presents the findings from interview data of the perceived barriers and challenges that impact on participation, non-participation and completion.

Work

Financial barriers were discussed by many participants as a major factor impeding on their ability to attend the programme. The need to return to work meant that some participants were not able to attend the programme as it was held during work hours:

I don't have enough time to go the programme… I am the only one that is working in my family so I have to go to work… I work twelve sometimes more hours a day and I only get to rest on Sunday… I think the programme might have been good but I just can't afford to take the time off… [Etuati, Niuean male non-participant]

One participant reported that while he was quite keen to attend the cardiac rehabilitation programme he was unable to due to work commitments. He articulated that he did try to access another cardiac rehabilitation programme but he could not afford it:

she [nurse] mentioned it to me but it just didn't fit in with work… I reckon it would have been really good for me to do it ummm… the only thing was it was just the clash… for me and probably for others it's all about the money cos we have to go to work… work was the thing that got in the way for me attending that one… now there was another one that I looked up cos I was doing some research after the surgery and there was another one I could attend but it cost a couple of hundred bucks actually I think it was five or six hundred… I think it was at Tamaki at the UniSports… I don't know if it was the same one that [nurse] mentioned but I found it on google I think the Auckland District Health Board website but it was just really expensive… it was like a workout exercise regime… the financial barrier, if it was on at a different time but then that's difficult too after hours… [Ofisa, Samoan male non-participant]

Some working participants articulated that although they were given the option of evening classes, they did not feel that they would have the energy to attend after work:

I can't do it after work you know, I thought maybe I could but when I get home I just can't, I'm too tired and I just need to rest I just can't do it… [Etuati, Tongan male non-participant]

Working participants that did manage to attend the programme reported that they were only able to do so as they had the full support of their employer:

they [work] were so worried about me and they said just go anything that you need to go to your appointments or anything just go we can sort things out here later, so when I said I wanted to go to the programme they were so supportive, gave me time off and said don't worry about it just do what you need to do to get better… I was lucky cos I don't think lots of people have such good bosses and they would find it hard to get the time off to go… [Akenese, Samoan female participant]

Time

Participants also found that family responsibilities and commitments left them with very little time to attend the programme:

I'm not working my wife works… I stay home and look after my parents and the kids so I'm really busy… and they said there's one at night but I still have to get everything done for the family, dinner on the table bath my kids and my parents my wife works all day she can't do it… [Tevita, Tongan male non-participant]

Similarly, the following participant commented that she prioritised family and church commitments rather than programme attendance:

Things just come up with family or church and I just have to drop everything and go… [nurse] did offer to pick me up but you know something always happens and I can't go… if I have the time I don't mind going with [nurse] but that's one of the main problems with me things are always happening that I have to attend to… [Moana, Samoan female non-participant]

Perception of need

Several non-participants felt that they had the relevant information and therefore did not need to attend the programme. The following participant said that because his mother had diabetes, he learned about the importance of nutrition and exercise. As a result, he felt that one of the reasons he did not attend was because he did not need to:

Long story… You know, my mum she have diabetic, you know diabetic...and she's dialysis as well… I'm the one hanging around with her…I know everything. You know, take to the doctor… Every time you know, they explain the same thing they explain with my mother… I understood everything, you know…Because I know everything from my mum, you know… [Tevita, Tongan male non-participant]

Receiving adequate information while they were in hospital was also reported by participants as one of the reasons why they did not attend:

I had an interpreter who helped me a lot to understand what the doctors and nurses told me, their advices and other information that I need for me to follow. I understood a little bit of what they talked about but it would be better if I could speak English… however I was thankful that [interpreter] was there to interpret all those information I follow closely the instruction for taking my tablets and try to eat more vegetables and healthy food though at times I ate meat with a little bit of fat, a bit of roast pig but not much and not very often [Latu, Tongan male non-participant]

Some participants felt that they did not need to attend the workshops as they could easily access the necessary information from their family GP:

I have a very good GP you know, I can ask him anything I want if I need to about my health and he has very good resources there, all these pamphlets about nutrition,

blood pressure and that sort of stuff and I know that I can go to him about anything and he has known me for so long that I can ask him and he will tell me what I need to know… [Moana, Samoan female non-participant]

Transport

A lack of transport was reported by some participants as a barrier to attending the programme:

I really want to go but I can't because no one to take me… even to go to an appointment and things like that it's really, really hard at this time because both my two sons are working and if they miss a lot of work because of coming to take me to different appointments and things like that… we are a bit worried about these days, you know it's good to have a job… they might lose the job of missing work too much… [Saane, Tongan female non-participant]

An elderly participant explained that he caught a taxi to and from the programme as he was unable to drive and public transport was an issue for him as he walked with the aid of a walker. However, due to the high costs of taxi travel, he was unable to complete the programme:

I only go to two… it was very expensive, you know very expensive for the taxi… worry for me to go taxi there… [Tomasi, Fijian male participant]

One participant reported that the closest programme to her was quite difficult to access by public transport. She opted to attend the exercise programme as it was easier to get to from her home:

It was too far like is there one in Glen Innes yeah aye… and the one in Epsom or Balmoral no Epsom I think it was too far by the time I leave home I have got a bus that comes out that way I thought it was so hard to get to from my house… if there was one that was closer to me I think it might be OK but yeah it would take half a day of travelling to get there and back. [Liana, Niuean female participant]

Language and comprehension

Participants reported that a lack of understanding due to language barriers could impact on Pacific patients attending and completing the programme:

I didn't see a lot of Pacific people… lots of Maori and a lot of Palagis… but the thing is I notice a lot of our Pacific people are older and the language barrier is the basic difficulty for them to converse our people maybe that's why they shy away because of language… if we have our own people to explain and talk to them that would be ideal…we have interpreters in the hospitals and the courts but there's not enough…

we need more because I have seen some people come through and I know they don't understand but there's nothing we can do… it's really yeah, it's not good…yeah some people shy away because of that. [Farani, Niuean male participant]

The following participant, who completed the programme, also highlighted the importance of language and comprehension:

If you have been here for a long time and could understand English then it would be all good… for a non-NZ born elderly person would never survive… you'd be lucky if you they come back a second time that's my first impression when I got in there… cos I mean I had a Chinese woman sitting next to me and she found it hard… that kind of programme is designed for English speaking people who understand the language properly. [Akenese, Samoan female participant]

Relationship building

Making connections and building relationships with other Pacific participants was also important, increasing participation and engagement in the programme. Also, being with other Pacific peoples helped participants feel comfortable and included. This is evident in following extract where a participant talks about her first exercise programme:

You walk in there [programme] and they look at you and think oh… out of place being the only Islander there was a man a brown man, but he's finished now it was good cos he was the only Islander around somebody you could relate to and know what you are going through. [Liana, Niuean female participant]

Having other Pacific people in their sessions was important for participants as they could provide each other with support and encouragement:

I see a lot of our people in the hospital but when I went to the programme there was only one Pacific Island woman there the first time she came she was very sick you know she was very down and I was talking to her, and we share and she says she had a by-pass you know and I said I have a by-pass too… and I just encouraged her and kept talking to her she can do it and she enjoyed the exercise I always try and encourage our Pacific Island you know, like at the Green Prescription I went to there was Pacific Islanders there and especially this one guy I always encourage him to keep it up keep going with the exercise because I been through because I know some of them are really, really down you know, really down and I encourage them, you be strong… we always help each other. [Setu, Samoan male participant]

The following participant also expressed her hope that there would be more Pacific people in the workshop:

And so I rocked on up there and I looked around the room and I was like oh okay spot the black [laughs]… and I looked around and I thought hmmmm I can't be the only PI here and then this other guy came in a Maori I think and I just felt a little more comfortable but um it's just I didn't know what to expect cos when I screened the room I thought okay umm… I was expecting that it wouldn't be um… I was hoping there would be some brownies there you know. [Akenese, Samoan female participant]

Motivation

Motivation was identified as a factor that led to programme completion. Participants who completed the programme spoke of their desire to improve their health and live a long life:

I joined this programme because I knew it would help me to stay health and to learn more about things to help me in this situation where I am now. [Kefu, Tongan male participant]

Participants also spoke openly about their desire to learn and make changes to improve their health for their families:

After the operation I could see how much it affected my family having a by-pass and them being scared for me I promised myself that I would never let them go through that again, I am in a good place now because I can see how much my life means to them I knew before but I think after it was just that much stronger… and I don't want my children to ever go through what I went through so I want to show them how to live healthy and long. [Setu, Samoan male participant]

What aspects of the programme worked well?

This section presents the findings from interview data on the strengths of the programme.

Programme strengths

Programme content

Participants spoke positively about the information they received from the programme. Many reported that they were not aware of the risk factors that contributed to their heart condition prior to the programme and found the information beneficial:

It was very helpful for learning new things about health – when you're young you didn't care about it but now that I'm 60 years old I see how everything I did has put

me here… The programme teach us how to live, how to be healthy, how to protect my heart… I've learned so much didn't know before. [Siaki, Samoan male participant]

Some participants reported that while they did have some existing knowledge prior to attending the programme, they felt that the programme provided more in-depth information that was useful:

I liked the way the pharmacist came in and explained each thing about each medication… I learned quite a bit about the medication I mean I understood what each one was for but not all the time doctors don't have a lot of time to go into the side effects and everything they're just prescribing something to help you and that's fine they'll just say it's a blood thinner it will help your heart but they don't go into the side effects but the pharmacist when he was there, he just broke each one down he said watch out for cramps and things like that and if cramps are happening too often go back to your local GP and they will review the medication that you're on… so yeah it was things like that that I thought hmmm I didn't know that… or if we weren't sure about anything so when we come in to pick up prescription just ask them and they should go through the whole thing again and let us know so that was a good positive thing to know… [Akenese, Samoan female participant]

One participant was grateful for the information he received about stress management in his one-on-one clinic appointment as he was unaware of the impact of stress on his health:

For me stress was a big thing too so we talked about how we can try and reduce our stress, it was good because now I've cut down on work I still you know just go out to my workshop and make some money… the family even the family too… I give all the responsibility to my nephew and then I just do a little bit but not like leading the family you know we are not young anymore… I have to cut back on things that make me too busy or too stressed, that was another good thing about the nurse we talked about those things and it got me thinking about how I can cut down and take it easy… [Setu, Samoan male participant]

Programme team expertise

Some participants said that having the programme delivered by experts increased their level of confidence that the information provided to them would be accurate, relevant and useful:

As I said I never question because my point is I'm there for better health… they are the experts I never ask or question what they are doing because I'm asking a question I don't know anything about… you know I wish I was trained to be a nurse [laughs] and then I will know all this stuff already… I just said to them you set the programme and I will do it because I know that I will improve with whatever they do for me [Sikope, Tongan male participant]

Feeling confident that their health needs are met was also mentioned by participants:

> *I just go there and open mind and whatever they will tell us to do I just follow, they know what they are doing I am just there to learn… I chose this one [exercise programme, Greenlane] because it's closer to me… and I choose there because everything is there you know, they check your blood pressure, your other things yeah and they do everything… and I'm saying I'm really happy with what they do in Greenlane…they have the nurses there to do all that stuff so I know I am in good hands [Setu, Samoan male participant]*

One participant reported that she joined the exercise programme because she knew that she would be supervised by trained nurses who would be able to provide the necessary support for her to exercise at a safe level:

> *They know what they're doing and they know how to help me keep improving… and also because I had the operation I feel safer being with them to exercise to keep an eye on me just in case you know, I don't know in case I push too hard or something… [Liana, Niuean female participant]*

Programme team attributes

Participants spoke positively about the motivation they received from the one-on-one support consultations with a programme team member either at the clinic appointment or the exercise programme:

> *They give you all the types of foods it's good for you… and they talk about, you're the one you're going to make you do it… if you want to do exercise and do all these things you will, so it's like motivation and management they provide for us too… [Setu, Samoan male participant]*

The following participant reported that she was appreciative of the encouragement and support she received from the nurse at her exercise programme:

> *[Nurse] is really good, she explains things more fully for me… um like rowing treadmills bike and the workouts for each part of my body… she pushes me at my level though you know, when I first started I thought I was running too fast cos I was so puffed out but she would bring me down again and as I kept going she just kept encouraging me I really like that cos usually I think I would just stop but yeah she motivates me a lot and she has a soft kind sort of voice that is just really nice especially cos I wasn't that fit when I first started… [Liana Niue female participant]*

Some participants had bad experiences with hospital staff being unfriendly or impatient with them or their whanau members. One participant reported that after such a negative

experience in hospital, she was very appreciative of the respectful way she and her husband were treated by members of the programme team:

> *You know some nurses are good and they understand and when for example, when at first [cardiac rehabilitation nurse] came introduced herself and I'm the nurse from the cardiac rehab programme which is the first time you know the first time someone did that introduced themself and explain who they are and talk to us like we were people not just another face in the ward and I thought good on you… it was the first good experience in the hospital. I should say that to her but I thought oh well I will tick coming back to the hospital… she made us feel comfortable and I liked her straight away… [Lita, Tongan female whanau member]*

Participants also felt that the supportive and encouraging manner in which they were dealt with by programme staff motivated them to believe that they could work towards making the necessary changes in their lifestyles to improve their health. The following patient felt that she was supported in a non-judgemental way by a programme team member in her one-on-one clinic appointment:

> *I told [nurse] that I still smoked and she just said one day at a time when you are ready you will stop. She was so supportive she told me she knew that it was one of the hardest things to try and stop but that I can take it at my own pace do it slowly and gradually and it will happen. You know, that was not what I expected I thought to myself as soon as I told her OK wait for it, you know wait for the whole you should stop blah blah blah but she just encouraged me and that's what I needed not to be told off like a child… I really appreciated her I felt like I could do it if I just cut down cut down you know and I have I have cut down so much. [Akenese, Samoan female participant]*

Some participants reported that they found the approachable and friendly manner of members of the programme team made them feel comfortable to talk openly during clinic appointments:

> *I found [name] bubbly and I looked at her and I thought shes got such a friendly persona and she would fit in well with our people cos she would take the time for us… she was just easy to talk to and she went out of her way to make me feel comfortable, I really liked her and I felt comfortable to tell her about some of my health how would I say health challenges [laughs] she was nice… [Taleni, Samoan male participant]*

Linkages with the Auckland City Hospital Pacific Family Support Unit

A recent development has been the establishment of a working relationship with the Pacific Family Support Unit based at Auckland City Hospital. All patients are referred to the Pacific

Family Support Unit and a person of their ethnicity, fluent in the relevant language, visits the patient and provides support and assistance. The cardiac rehabilitation programme team are currently working to provide linkages between discharged Pacific patients and the community-based church programmes offered by the Unit.

What aspects of the programme can be improved?

This section provides evaluation findings on the challenges of the programme.

Programme challenges

Appropriate level of understanding

In addition to language barriers, some participants found that the information was not delivered at an appropriate level and was difficult to understand, particularly if English was a second language:

> *Visual aids is really really good… learning how to talk to them at their level is better still… you don't just rock up to the board, put a visual aid up there and then all of a sudden spout off like you're up at university or something like that, no you break it down – you need to be aware of who the audience is so you can come across to them in a respectful manner… It should be more understandable it's not there to make them feel like they're stupid, you've got to design it in such a way that it is user friendly for them and that they still feel confident within themselves that they can relate back to the speaker you know there's nothing worse than sitting in a room full of people and only 95 percent grasp it and the other 5 percent are struggling… or sometimes there could be more than that… [Akenese, Samoan female participant]*

Some participants also felt that while they could understand and pick up on some of the information, they had difficulties understanding all of the information being presented:

> *Some I understand, some I don't understand… Yeah yeah. I don't speak good English… they talk and I understand some… but not all of it especially with the words sometimes big words… I understand the food and the exercise that was easy but not the thing you explain to me, like why is this happen to me why am I blocked in my heart… [Tomasi, Fijian male participant]*

Similarly, another participant reported that although he could understand English, he found the delivery too fast and the medical terms difficult to grasp. He also felt that this may have contributed to his inability to recall much of the programme content:

Some of the terms they use they were all medical aye… and even though I can understand English it's hard to understand English when all these medical terms are in there too so you're trying to understand them as well… they need to explain things in a way that people can understand… a lot of the stuff I just didn't really understand, it was too fast too aye and so maybe that's why I don't really remember much about the programme… you need one of our people who can go over it and over it because some of us need more understanding… not just because it's English but also because the stuff is new and we might not be understand it as much so we need to go over it more times… [Farani, Niuean male participant]

Presentation style of teaching

Some participants expressed that the presentation style of teaching negatively impacted on their ability to stay engaged:

I really liked everything about the programme. Just the teaching might need to add something to the teaching because sometimes it was a bit boring just sitting there and listening but they had good stuff it was just hard sometimes… [Latu, Tongan male participant]

Similarly, the following participant reported difficulties staying alert and absorbing the information:

It's hard to sit there for a long time and listen to someone talking non-stop for two hours… I don't know if it was just me but my brain starts to wander and especially because a lot of the stuff I don't really understand and then I lose concentration or interest… [Farani, Niuean male participant]

Participants felt that the style of teaching did not support group discussion or allow time to make friends and connections with other participants. This was seen as an issue for some participants who felt that group discussions might have contributed to more engagement with the programme through sharing experiences and information:

A lot of group interaction would have been better… it would be suitable, I was expecting more… we did have one group discussion but it was really rushed and there wasn't even enough time to finish the ice-breaker they gave us cos everyone wanted to talk and share their experience with each other that would have been nice to be given time to do that because as soon as we broke into groups everyone was like giving their background it was nice to know what others had been through… but the group interaction was good because we had to answer true or false questions and then discuss it amongst ourselves that was good because you kind of get to make some friends rather than just sitting there and not knowing the person sitting next to you… [Akenese, Samoan female participant]

Similarly, the following participant articulated that had there been more group discussions, he might have felt more comfortable with other programme participants:

> *I think it would be nice to do in a group sort of thing you know… I didn't know anyone there and it was a little uncomfortable especially cos I went by myself and it was hard for me to just go up to people and just talk but if we done more group things that would have helped me feel comfortable with others… but like I said before I really liked the workshops because I learnt so much but I think it needed more talking with others in the group [Siaki, Samoan male participant]*

Discussions with the programme team indicated that recent changes have been made to the delivery of the programme to make it more interactive.

Data collection and programme documentation

Obtaining accurate data is challenging due to the multiple databases from which the data is sourced. A lack of programme documentation on referral to, uptake and completion has also been highlighted as a challenge. These challenges impact negatively on the ability of the programme team to monitor utilisation, programme effectiveness, and highlight where there may be areas for improvement.

Process evaluation summary of key points

What are the key aspects that contribute to Pacific participation and completion of the programme?

Programme reach

- Clinic attendance is high with almost three quarters (74%) of Pacific patients referred attending.
- A large number of Pacific patients referred to the programme are not attending (76%).
- 15% of all Pacific patients referred to the programme are attending all four workshops.
- A small percentage (9%) of Pacific patients are attending at least one programme session but are not completing the programme.

Participation and completion issues

- Perception of need was identified as a reason for non-participation: receiving adequate health information while in hospital; familiarity with the health information; and the ability to access health information easily through a GP were cited by non-participants as a factor in their decision not to attend the programme.
- Lack of time due to family, church, and work commitments was cited by many non-participants as reasons for not attending the programme.
- Participants reported that a lack of transport also impeded on their ability to attend the programme.
- Language and comprehension was cited by both participants and non-participants as barriers to low attendance by Pacific patients.
- Feelings of discomfort being the only Pacific person in the room were also reported as a contributing factor to participants' lack of engagement in the programme.

Data collection and programme documentation

- Consistent and comprehensive programme data collection and documentation needs to be implemented to ensure accuracy of information regarding programme reach, and to inform further programme development.

What aspects of the programme worked well?

Programme strengths

- Participants found the programme content informative, useful and relevant to their health needs.
- The opportunity to build relationships with other Pacific participants was seen as an important factor that promoted engagement.
- Participants believed that the expertise and skills of the programme team was a major factor in their decision to attend the programme and have confidence in the skills and knowledge provided by the team.
- Participants were appreciative of the respectful, encouraging, supportive and non-judgemental approach taken by members of the programme team. Many felt that this was an important factor that increased their motivation to engage in the programme.

What aspects of the programme can be improved?

Programme challenges

- Language barriers can impact on Pacific patient engagement in the programme.
- Participants felt there could be improvements in programme delivery to assist understanding. The use of medical terms, without explanation, was difficult to comprehend and fully engage in the programme.
- The presentation style of teaching could be improved to include more group activity sessions to increase participant engagement in the programme.

Outcome evaluation findings

The following section presents the outcome evaluation findings. The following short-term outcomes are discussed: Pacific participants increase their knowledge and understanding of factors that influence their well-being; and Pacific participants are motivated to make lifestyle changes. Progress towards achieving the following medium term outcome: Pacific participants make lifestyle changes, is also discussed. It was not possible within the scope of this evaluation to determine whether long-term outcomes were met.

To what extent have the outcomes been achieved?

Short-term outcomes

Increased knowledge and understanding of factors that influence well-being

Participants recalled a variety of risk factors that contribute to heart disease. These included: lack of exercise; smoking; high cholesterol; high blood pressure; nutrition; and stress:

> *I didn't know that food could block my heart and cause a stroke or heart attack… and I was thinking how I always eat the mamoe (mutton flaps)and povi masima (salted meat) but not know it was blocking my arteries… I know that fatty food makes me fat but I didn't know the damage it does inside my body you know inside my heart… I didn't know that… [Siaki, Samoan male participant]*

A whanau member of one of the Pacific patients explained how she and her husband learned about the symptoms and dangers of high blood pressure at a clinic appointment. The knowledge she gained meant she was aware of her own health and sought medical help when she experienced blood pressure related symptoms:

> *He [husband] was so worried about me you know, I was quite sick I am the only one who looks after him and I work and I worry so when I started getting terrible headaches my husband mentioned to me high blood pressure and then I remembered what we had been told by [nurse]… the doctor thought it was just from my stress trying to keep everything together during my husband's illness and recovery I wasn't sleeping or eating well but we have that under control now, I am looking after my health better [Lita, Tongan female whanau member]*

The programme exposed participants to a variety of ways in which they can improve their heart health and reduce risk factors that they were not aware of before the programme:

> *I learned from the nurse cos I think people look at exercise around weight loss but they don't actually look at exercise for the heart you know… I wonder if that is something you should look at if you start connecting exercise you maybe might get some people go oh you know I don't need to lose weight actually it's not about losing weight it is about making heart stronger so it lasts longer… when [nurse] told me that I was like I didn't know that and the more you exercise the stronger your heart becomes so yeah I thought that was really good and it helps me stay motivated to keep exercising my heart… [Liana, Niue female participant]*

Participants learned skills in reading food labels that helped them make healthy food choices:

> *The programme was really good for me, I learned how to read the food labels to show the amount of fats and sugar where before I never know the importance of those labels… I read the food label for the contents now before buying food… [Latu, Tongan male participant]*

Participants are motivated to make lifestyle changes

Participants learned that making only small changes was positive and felt confident that they were able to do this:

> *The best thing I got out of rehab was that it not gonna happen overnight and you change one thing at a time till you build it up… one step at a time if you buy dark blue milk buy light blue milk if you can keep buying light blue milk for your family then that's an improvement then you start ticking off your little checklist… move on to the next challenge [Farani, Niue male participant]*

Participants reported that they were motivated to increase their levels of physical activity:

> *The other thing is… I'll go down a flight of stairs and I will go up a flight of stairs every second day or something like that cos I'll stop at the top and I'll go no I've got to do this… walk down and walk back up and I'll get to the top and I'll be like oh my knees are not what they used to be [laughs] but I know I need to do it I need to push myself to be fitter to be stronger… [Taleni, Samoan male participant]*

The following participant reported that although she and her family were struggling financially, she was motivated and committed to making positive lifestyle choices:

And then I have a lot of Ploughman's or Burgen breads only for here, only for work not at home… at home it's called budget multigrain or brown rivermill [laughs] cos it just goes too fast and that bread it's just for me [laughs]… we compensate a lot that I'm glad that I eat reasonably well here [work] but at home… you just have to do what we can to feed our whole household but we try… [Akenese, Samoan female participant]

Medium-tem outcomes

Participants make lifestyle changes

Participants articulated a range of lifestyle changes that they made as a result of an increased knowledge of factors that influence their wellbeing and heart health. In general, nutrition and exercise were identified by participants as being the main areas they needed to address. As a result, the main lifestyle changes reported by participants were related to healthy eating and increasing physical activity.

Participants reported a range of ways they were making healthy lifestyle changes in relation to their nutrition and eating habits:

Yeah more salads and veges… takeaways less takeaways… [Liana Niue female participant]

Participants reported changes in the way they prepare food and the type of foods they eat:

On the chicken I take the skin away. Now I put in a pot, I boil it. Put the water away, still fat. Now I'm still doing that. Same thing as the meat, the beef… I eat the vegetable. [Tomasi, Fijian male participant]

There is evidence that the skills learned from the programme were being implemented at home:

So I still make changes even now when I go shopping I have a look around and if my wife cooks brisket without the bone she'll slice it all up and do the veges, when she does a boil up and she'll throw everything in it… and she'll empty the water with any fat in it and then bring it back to a boil with new water… [Taleni, Samoan male participant]

One participant explained that her children were also preparing meals in healthy ways:

When the kids cook mince now they put everything in now like veges, they do it the way I do it and then they boil up the pasta and they drain it and just chuck it in… and they just love the tinned tomatoes [laughs] and they just use what we have the veges

they make it the way I do it… we're kind of changing… you know before I started all this I was 197 kilos I've lost, I'm down to 175 and it's only been doing it slowly cos you know can't afford it… [Akenese, Samoan female participant]

Participants spoke of increasing their levels of physical activity:

Just walking cause I live down by the beach so I do my walks at night… not every night four or five times a week or so… before it was like maybe two, three yeah maybe two times a week… [Liana Niue female participant]

I always exercise because it's good for me… and people when they look at me they say, oh you're well and I say yeah I have to do it for my family and if I don't do it I am not helping myself and exercise and all these things I learned they help me stay well… [Setu, Samoan male participant]

As a result of the programme, some participants reported that they regularly took the prescribed medication:

What happened was so big for me, I have learned my lesson about my pills… I had pills from before my operation but I never take them you know, I was drinking the Samoan herbal medicine but the programme helped me understand what the pills for and I take my pills now, never forget my pills… [Siaki, Samoan male participant]

For me the programme is very successful as my lifestyle has been changed, I'm eating more healthy food, do exercise make sure I take my tablets when required, go to clinic and check up… [Kefu, Tongan male participant]

Only one participant said that she smoked prior to her cardiac event. Although she admitted that she has not stopped smoking, she had reduced her smoking considerably:

I don't smoke as much I know I don't… when I'm at work it's not too bad cos I don't smoke here anymore, I don't smoke during the day when I'm at work and I'm really happy with that…I have my last cigarette when I pull into that driveway and then I have one in the car on my way home… I have one at home so that I can deal with the kids [laughs] and then after dinner, I've learned not to have a smoke you know… I've just cut little things out on the way… [Akenese, Samoan female participant]

Outcome evaluation summary of key points

To what extent have the outcomes been achieved?

Success in achieving short-term outcomes

Increased knowledge and understanding of factors that influence well-being

- Participants recalled a variety of risk factors that contribute to heart disease.
- The programme exposed participants to a variety of ways they can reduce their risk factors that they were not aware of before the programme.

Participants are motivated to make lifestyle changes

- Participants felt able and confident to make lifestyle changes by starting with small changes.
- Participants reported that they were motivated to increase their levels of physical activity.
- Participants reported that they were motivated to make healthy changes to their diet and nutrition.

Progress towards medium-term outcomes

Participants make lifestyle changes

- Participants reported a range of ways they were incorporating healthier foods into their diet.
- Participants reported that they were preparing their food in healthier ways.
- The skills learned from the programme were being translated to the home environment with whanau members preparing and eating healthier food.
- Participants reported increased levels of physical activity.
- Participants regularly took their medication.
- Participants reported reducing other risk factor behaviours such as smoking.

Concluding comments

Findings indicate that Pacific patients who completed the programme: were engaged in the programme; had increased their knowledge and understanding of factors that influence their wellbeing and heart health; were motivated to make lifestyle changes; and made positive lifestyle changes which were a noticeable change from the start of the programme.

Participants increased their knowledge and understanding of their heart condition and the risk factors that contribute to their heart health. Participants articulated a range of strategies to reduce their risk factors particularly in relation to nutrition and healthy eating. Participants reported that they felt confident and were motivated to make healthy changes to their diet and nutrition as well as increase their levels of physical activity. Participants reported a range of lifestyle changes that they implemented following the programme including: taking their medication; a reduction in tobacco consumption; increasing level of physical activity slowly and safely; and eating healthier foods.

Aspects identified as major strengths of the programme include: informative, useful and relevant information; expertise of the programme team that increased participants' confidence and engagement in the programme; and the supportive and encouraging nature of the programme team. The opportunity to build relationships with other Pacific participants was also seen as an important factor for engagement in the programme. Participants felt that the challenges of the programme included: language and comprehension barriers for Pacific peoples, particularly those who were not proficient in English; some of the information was not presented in a way they could understand; and the need to include more group discussion and interaction in the delivery of the programme.

Challenges around programme reach for Pacific patients were identified: 9% of Pacific patients referred to the programme attended at least one programme session but did not complete; 15% completed the programme; 76% of Pacific patients did not attend. A lack of programme documentation on referral to, uptake and completion has also been highlighted as a challenge. Factors that could impede on participation and completion levels were identified and include: perception of need, transport and time. Language and comprehension was cited by both participants, non-participants and the programme team as a major challenge when engaging with Pacific patients and could be a possible reason for the low attendance of Pacific patients. Feelings of discomfort being the only Pacific person in the room were also reported as a possible contributing factor to Pacific non-engagement in the programme.

Case 3: Manawa Ora

This process and outcome evaluation is based on available programme documentation, interviews with Pacific patients and their whanau, notes from meetings, discussions and one focus group interview with programme staff.

Process Evaluation

This section presents the process evaluation. It will begin by describing the programme aims and objectives, followed by a discussion of what the programme consists of in practice including: location and timing; programme resources and materials, referral processes; and programme eligibility. Programme reach will also be discussed using programme attendance data to determine Pacific peoples' uptake and completion of the programme. Finally, the section will conclude with an examination of what aspects of the programme worked well, and what aspects of the programme can be improved.

Programme aims and objectives

The programme aim is:

- To support the needs of Maori and other high needs populations who have been affected by cardiovascular disease to manage their heart conditions.

The objectives are to:

1. Improve Maori and other high needs populations understanding of cardiovascular disease and management of cardiovascular disease.
2. Improve understanding of cardiovascular disease prevention amongst whanau members of Maori and other high needs populations.
3. Provide health promotion activities to support Maori community awareness raising about cardiovascular disease as well as best practice cardiac rehabilitation.
4. Link programme participants to universal health services to meet their identified needs.
5. Promote the service with Primary Health Organisations to encourage referral from primary care as well as secondary and tertiary services.
6. Set up systems to collect accurate and effective data including utilisation of the service, ethnicity and number of visits for analysis.

What does the programme consist of in practice?

Services available

Te Hononga o Tamaki me Hoturoa is a Maori health provider organisation formed through the merging of Tamaki PHO and Te Kupenga o Hoturoa PHO in 2010. Te Hononga o Tamaki me Hoturoa offers a range of services across the Auckland and Counties Manukau District Health Board areas. Although the primary focus of the organisation is to improve health outcomes for Maori health and reduce Maori health disparities, services are offered to all people living in quintile five areas of the New Zealand Deprivation Index, regardless of ethnicity.

Services offered by Te Hononga o Tamaki me Hoturoa include:

1. Ahua Ora – a community-based programme designed to promote healthy lifestyle choices, and increase knowledge of diabetes, obesity and heart disease for high needs population living within a quintile 5 area.
2. Cancer Services – a community-based programme designed to support Maori who have been diagnosed with cancer living within Counties Manukau District Health Board boundary.
3. Whanau Ora Cardiac Rehabilitation Programme – a community based cardiac rehabilitation programme designed to provide clinical expertise, support and education to patients resident in the Counties Manukau District Health Board area who have experienced an acute coronary condition.
4. Whanau Ora Long Term Conditions Service– a community based programme designed to provide clinical and social support to individuals and whanau/families living in the Auckland District Health Board area who have been diagnosed with long term conditions.
5. Manawa Ora – a community-based Kaupapa Maori Cardiac Rehabilitation Service designed to support the needs of Maori and other high needs populations who have been affected by cardiovascular disease.
6. Taonga Teen Parent Unit – a school-based programme to support teen-aged mothers or mothers to be (13-19 years) to continue their education with their children, in a safe and positive environment, for the betterment of themselves and their children.
7. Tamaki Toi Tu Kids Service – a community-based, clinical child health service designed to support whanau with complex social issues and address common child health needs.

8. Hohourongo service – a community-based family violence programme designed to support violence-free families.
9. Pu Ora Matatini – a programme designed to support Maori midwifery and nursing students at Manukau Institute of Technology living within the Counties Manukau District Health Board area.

Programme history

The Manawa Ora programme (the programme) is a Phase II cardiac rehabilitation service in the Auckland District Health Board area funded by the Auckland District Health Board. Originally delivered under a contract with Tamaki Health PHO, it is one of the services that was carried over to Te Hononga o Tamaki me Hoturoa following the merger. The programme is based on the New Zealand guidelines for Phase II cardiac rehabilitation, the principles of kaupapa Maori, and incorporates aspects of the Heart Guide Aotearoa. It is designed to help people newly diagnosed with acute coronary syndrome who have received medical treatment either within the Auckland District Health Board provider arm or general practice.

The establishment of the programme was the result of recommendations made by He Kamaka Oranga, Maori Health, Auckland District Health Board in 2006. They were based on Auckland District Health Board data and two pieces of research commissioned by the Auckland District Health Board (audit comparing best practice care between Maori and non-Maori (2004) and a 2004/05 qualitative study exploring patient and practitioner experiences with primary health care provided to Maori with heart disease). One of the recommendations was to establish a community based Kaupapa Maori Cardiac and Stroke Rehabilitation service. The following year (2007) a business case was put forward and the service was established in 2008 and provided by Tamaki PHO.

The particular emphasis of the service is on improving access to cardiac rehabilitation for Maori and other people living in Auckland quintile 5 areas of the New Zealand Deprivation Index, regardless of ethnicity or PHO enrolment. Service specifications stipulate that the programme team will co-operate and co-ordinate with other healthcare services to support people with heart disease and whanau members reduce their risk profile and maximise health status to establish a strong foundation for on-going health and wellbeing.

Initially, the programme was intended to be a nurse-led case management service. Discussions with the programme team indicated that this has not eventuated due to challenges in securing a full-time nurse. Since its inception in 2009, the programme has been led by Allied Health Workers with a specialty in lifestyle coaching and whanau ora health and wellbeing. The lifestyle coach underwent 8 months training and supervision by

the Cardiac Rehabilitation Nurse Specialist team of Auckland City Hospital to increase his knowledge and skills in cardiac rehabilitation.

Programme implementation

A total of 1.5 FTE is allocated to the programme. The programme is jointly delivered by a Lifestyle Coach (1FTE) and a Whanau Ora worker (.5) to support patients and their families deal with the impacts of cardiovascular disease.

There are two components of the service:

1. Whanau Ora Support component
2. Cardiac rehabilitation service component

Whanau Ora component

The Whanau Ora component is designed to promote the holistic health of patients by focussing on strengthening their physical (taha tinana); spiritual (taha wairua); mental (taha hinengaro); and family (taha whanau) wellbeing. The role is largely one of health information and education provision, as well as the coordination of care for the patient to other health and social agencies. The primary focus is on promoting health, wellbeing and education. Advocacy and support is also provided for patients to attend doctors or specialist appointments.

The Whanau Ora worker supports the client through an initial assessment to identify any areas of social or health need. The assessment will include an examination of their income, living situation, living conditions, level of family support available to them, health and wellbeing issues. Once these are identified, the Whanau Ora worker and the participant develop an individualised Whanau Plan setting out the participant's goals and agreed steps to achieve their goals. The Whanau Ora worker then identifies services that may provide assistance or support for the participant and works with the participant to contact and access these services. The aim is to support and empower the participant to access required services on their own.

Cardiac Rehabilitation component

The home-based cardiac rehabilitation component is designed to support clients and their whanau deal with the impacts of cardiovascular disease. In order to reduce risk-factors and the incidence of further cardiac events, clients receive comprehensive support in the following areas:

1. Nutrition
2. Physical Activity
3. Weight management
4. Stress management
5. Smoking cessation

There is a strong focus on working with patients and whanau to develop an individualised plan. A lifestyle pre-assessment tool and medical assessment form is administered with the programme participant in the first session to determine the participant's health conditions, identify risk factors and assess lifestyle behaviours. The Lifestyle Coach then works with the participant to identify their goals in relation to changes they would like to make - for example nutrition and exercise. Once these are identified, the Lifestyle Coach and the participant develop an individualised plan setting out participant's goals and agreed steps to achieve them. Once these plans have been finalised, the Lifestyle Coach then works alongside the individual to support them to achieve their goals. Discussions with the Lifestyle Coach have indicated that for most participants, weight management and physical activity are key areas for change.

Location and timing

The programme is delivered to individuals and their whanau at a location and time which is most convenient for them. This can include their home, workplace or other community setting and each session lasts between an hour and an hour and a half. The programme is 12 weeks in duration and the amount of sessions per week depends on each individual patient. Some patients who require more support have more sessions per week. Other patients might only require the support sessions once per week. Funding is available for up to three visits per individual per week.

Programme resources and materials

A number of programme resources and materials are used by the programme team to aid in the delivery of the programme. Nutrition and physical activity resources accessed from the Heart Foundation and information pamphlets from the community services the programme are linked to are used by the programme team to promote healthy eating and increase knowledge of health and social services available in the community. The programme team are smoking cessation (Kia Auahi Kore Quitcard) registered and are able to prescribe Nicotine Replacement Therapy smoking cessation aids if requested by programme participants. Fitness equipment such as boxing gear, weights, medicine balls and strength bags are also available for physical activity sessions with participants.

Referral

Referral Pathways

There are three main ways in which patients can access the programme: referral from a range of primary and secondary health services; referral from other services of Te Hononga o Tamaki me Hoturoa; or by self-referral. Discussions with the programme team and a review of patient referral forms indicate that most of the referrals for the evaluation period were received from the Auckland District Health Board cardiac rehabilitation service.

When a referral is received by the programme team, contact is made with the patient within 48 hours to arrange the initial visit. The programme team have three attempts to try to contact the patient either by telephone or visiting the home. If after three attempts, contact has not been made, the programme team will send out a letter inviting patients to contact them. If there is no response to this letter, the patient is discharged from the service. Patients who decline an invitation to participate in the programme are also discharged from the service.

Eligibility

The target population are all adults living in the Auckland District Health Board catchment with cardiovascular disease or a cardiac condition who have been referred to the programme through: Auckland District Health Board primary or secondary services; internal referrals from other services within Te Hononga o Tamaki me Hoturoa; or self-referral. Although the service is universally available, Maori and other high needs populations living in Auckland City quintile 5 areas in the Auckland District Health Board area are a particular focus of the programme.

What are the key aspects that contribute to Pacific participation and completion of the programme?

Programme Reach

The purpose of this section is to determine whether the programme is reaching Pacific patients. The data for this evaluation is based on a review of the Ministry of Health Quarterly Programme Monitoring Reports for the period January 01, 2012 – January 01, 2013. A review of available patient files (32) was also undertaken to provide more in-depth information that was not available in the monitoring reports.

It was hoped that patient information that is routinely collected on the organisation's Medtech database including: referrals received; ethnicity, age, gender and health conditions

as well as programme attendance and completion data could be used to inform the analysis. Discussions with the programme team indicated that the use of the Medtech database was discontinued during the evaluation period, and they are still waiting for the implementation of the new MOHIO database system. Therefore, this data could not be obtained.

Eligible Patients

Programme monitoring reports for the period January 01, 2012 – January 01, 2013 indicate that a total of 56 referrals were received by the programme team. Due to a lack of data and documentation, it has not been possible to ascertain with absolute accuracy the ethnicity of referred patients. However, discussions with the programme team indicated that the majority of patients referred were Maori. A review of the patient files showed that patients from the following ethnic groups were also referred: 6 Pacific; 1 African; and 1 Pakeha.

Of the 56 patients referred to the programme, 46 (82%) accepted an invitation to participate in the programme. Ethnicity was recorded for 44 patients that accepted representing the following ethnic groups: Maori 35; Pacific 6; Indian 1; and Other 2. Although there is no available documentation reporting acceptance or refusal, discussions with the programme team indicated that the difference between the numbers of patients that accepted the invitation (46) and the number of patients referred to the programme (56) is due to the patient either declining to participate or patients that were unable to be contacted and therefore discharged from the service.

Pacific patient referral

According to the patient files, Tongan patients made up the majority (3) of Pacific patients referred to the programme. Two Cook Island patients and one Samoan patient were also referred to the programme. All but one of the patients referred were male. The main referral source was the Auckland City Hospital Cardiac Rehabilitation Service (4). The remaining referrals were self-referral (1) and referral from another service within Te Hononga o Tamaki me Hoturoa (1). The following table presents the demographics and referral source of Pacific patients referred to the programme.

Referral source and Pacific patient demographics

#	Referral Source	Ethnicity	Gender	Age	Completed
1	Auckland District Health Board	Samoan	Male	81	No
2	Auckland District Health Board	Tongan	Male	79	No
3	Auckland District Health Board	Tongan	Male	20	No
4	Auckland District Health Board	Tongan	Male	59	Yes
5	Internal	Cook Islands	Male	74	Yes
6	Self-referral	Cook Islands	Female	31	Yes

Discussions with the Lifestyle Coach indicated that the three Pacific patients that did not complete the programme were unable to be contacted either by telephone or home visit. A letter was sent to their home and upon receiving no response from the patient, they were discharged from the service.

Programme attendance and completion

There have been some issues around the definition of completion. According to service specifications, completion is defined as a patient completing at least 80% of the programme. Discussions with the Lifestyle Coach indicated that it has been difficult to assess completion based on this criterion as the level of support required by patients differs from individual to individual. For example, some patients who may require less support and/or reach their goals a lot faster than anticipated and may decide that they no longer require support, discontinuing the programme before completing 80% of the programme. Completion has therefore been re-defined by the service and is now assessed according to the needs of individual patients. Patients who require more support after their 12-week programme are usually re-enrolled in the service to continue to work towards achieving their goals as set out in their individualised programme plan.

Of the 46 patients who accepted an invitation to participate in the programme, a total of 16 (35%) were reported to have completed the programme. Of the 6 Pacific patients that were referred to the programme, three completed (50%).

Participation and completion issues

Accessing patients

Contacting Pacific patients to set up the initial home visit was often challenging for the programme team, either because they were not able to make contact when the patient was home or the phone was disconnected. To try to reach patients who have disconnected phone lines, the programme team make home visits. This can be time consuming particularly if multiple visits need to be made and they are still unable to make contact. Processes for contacting patients limit the programme team to three attempts. Although they sometimes try to extend this, the next step of the process is to send out a letter inviting the patient to contact the programme team.

Language barriers

Language barriers and comprehension were also articulated as being a barrier when trying to engage with Pacific patients. The programme team indicated that they had difficulty accessing interpreter services through the Auckland District Health Board, and there is a limited budget for interpreter costs. Despite several attempts to access Auckland District Health Board interpreter services for patients, they have only been successful once. In this instance, two months had passed from when contact was made with the patient and the engagement of an interpreter.

One of the interview participants recalled being told about the programme when he was in hospital. On returning home, he called and set up an appointment with the Lifestyle Coach. An initial visit was scheduled but he forgot about the appointment so was not home when the Lifestyle Coach visited at the agreed time. His wife was advised by the Lifestyle Coach that he would follow-up to reschedule an appointment. At the time of the interview, he had still not heard back from the Lifestyle Coach. Discussions with the Lifestyle Coach indicate that he is trying to secure an interpreter to accompany him to do the initial assessment.

The programme team said they are fortunate to have Tongan workers in the organisation who are able to provide some interpreter assistance. However, this is far from ideal as the assistance is provided on top of existing workloads and depends largely on availability.

Perception of need and existing knowledge

One patient said that he did not remember being contacted by the service. This was an elderly Tongan man who reported that when he returned home he was visited by a nurse and an interpreter who discussed the importance of nutrition. He was unsure of where they came from but indicated that he learned how to improve his eating habits. He also said that even if asked to participate in the programme he would not have accepted as he felt better after surgery and therefore did not need to participate:

No I don't need it (the programme) I don't feel anything anymore, I am fine now… [Malo, Tongan male participant]

What aspects of the programme worked well?

This section presents the findings on the strengths of the programme.

Programme strengths

Home-based programme

In general, the convenience of the home-based programme was viewed as positive. The following participant reported that because she and her husband did not have transport the programme was ideal for them. She also felt more motivated to engage in the programme and to improve her lifestyle because the Lifestyle Coach made an effort to visit her and deliver the programme in her home:

They came to the house you know… that's the best thing… they came to the house and they sit with you at home and they talk about the programme first and then you go and do the exercise with them…I prefer the home visits… I believe it brings the… I don't know it's sort of um… how should I say it is sort of an incentive for the people to work harder when they come home, they actually come home to you… they make an effort to come and actually come to help you start on something you know to really boost to try and push you in a good way to go the right path to go… I wish all the physical education people could come out to us and not just wait in the gym for us to come because some of us can't come out there… a lot more people should go out like this… [Selina, Fijian female participant]

Another participant with limited mobility reported that it would be hard to attend a programme delivered outside of the home:

I find it very hard to get around you know since my stroke so I don't really like to go anywhere because it is such a big effort to get me there and then I need someone with me all the time… it's good that [Lifestyle Coach] came to me it made it easier for me and we will just go across the road to the park to do my exercise… [Amosa, Cook Island male participant]

Individualised programme

Tailoring the programme to meet the individual needs of participants was a major strength of the programme as it allowed them to work on areas they prioritised, resulting in more engagement in the programme:

> *I have always been a healthy eater so that was not really big he did give me some advice on what to do but mostly it was about building my strength and fitness which I thought was really good of him to do for me…[Lifestyle Coach] knew that the main thing I wanted was to strengthen my muscles especially because the stroke really affected my legs… he would take me walking and do some exercises to build up my strength… [Amosa, Cook Island male participant]*

The following participant reported that the skills of the Lifestyle Coach to design a programme at the appropriate level of fitness and physical needs for her and her husband were a strength of the programme:

> *The young man was really nice, he was very good with his work let me tell you that first he took us on walks you know long walks and assessed how far we could go without breathing light too you know… he understood us, he would time us and then notice our breathing and then we would come back again and then we'd sit you know have a little rest and then do little exercises inside the house you know like pushing the wall we found it a good start… I think it's good for us at our age and us that we don't move around too much… I don't know it was a wonderful start for us and then we started going to the gym… he took us to the gym, first it was the water one you know the walking one in the water started off with that… and from there we started going slowly into the treadmill and then the bicycle and he [husband] went to lift a little bit of weights, a little bit not very heavy… but I found the water sport was a little bit more convenient for him [husband] and me especially me… for me I've got a little bit of a knee problem… that's why the pool was the best…my doctor said for me to go back to the pool cos the padding of my knees is gone so the pool is good for me… [Selina, Fijian female participant]*

Programme staff attributes

Participants discussed at length the approachability and likeable nature of the Lifestyle Coach. They felt that a major part of their motivation and engagement in the programme was due to his supportive, respectful and gentle manner:

> *I used to look forward to Thursdays because I know that [Lifestyle Coach] is coming… he makes me come alive cos I'm out there doing things… with [Lifestyle Coach] he would take me out for a walk and I was getting better at it too… walking faster… [Lifestyle Coach] is that kind of person too… you tend to like him… he's a very likeable person, he is a lovely guy… it's just the way he talks, you feel good with [Lifestyle Coach], I feel good with him… he doesn't force me to do things, he asks me and*

that's one thing I like about him too is he is a very kind boy… [Amosa, Cook Island male participant]

The following participant also spoke highly of the ability of the Lifestyle Coach to make her feel safe and valued:

I must say that young man knew how to deal with people, he had beautiful people skills and you need someone like that to come and help you you know… someone who understands that knows how to talk and you know makes you feel safe that you know that someone is there that is good… supportive and he did it in a gentle way but he was also firm you know…you need to have the people skills and the respect especially the respect and really come down to your level… some of them you know they're a bit up there and when you're not doing it they make faces I've seen it… maybe some more training of our people not to be harsh, soft spoken but firm… [Selina, Fijian female participant]

Cultural processes

Discussions with the programme team indicated that they acknowledge that working with Pacific peoples requires knowledge of Pacific cultural processes and protocols in order to increase engagement with Pacific patients. During discussions with the Lifestyle Coach it was highlighted that engagement with Pacific patients has increased since the employment the new Whanau Ora Worker in February 2013.

The Whanau Ora worker articulated that she understands that the service they provide has to be culturally appropriate and safe for participants. Although she does not have an in-depth understanding of many of the different Pacific processes, the Whanau Ora Worker enlists the help of Pacific networks to ensure she is respectful when working with different Pacific groups. Examples of this included securing a Tongan male interpreter to work with an elderly Tongan male as this was more appropriate than a Tongan female interpreter. Other changes she feels have made a difference include the use of Pacific greetings in the letters sent out to patients and greeting Pacific patients in their respective language. The Whanau Ora worker reported that since these changes were made, Pacific participants have tended to be more likely to engage with her.

Linkages with community services

The programme team have extensive networks with a range of community health and social services that they are able to connect patients with. These include: WINZ; Auckland City Mission; counselling services; food bank; emergency housing; Housing NZ; Maori Roopu, social workers and whanau support team; Auckland District Health Board cardiac rehabilitation Services; and Auckland District Health Board Pulmonary Rehabilitation Service. The programme team also have access to the multi-disciplinary team and long-

term conditions team within Te Hononga o Tamaki me Hoturoa that includes nurses; social workers, psychologist, community whanau workers, whanau family prevention team; and child health workers.

What aspects of the programme can be improved?

This section provides evaluation findings on the challenges of the programme.

Programme challenges

On-going support

Participants said that it was difficult to maintain the changes made during the programme, once the programme finished:

> *I think if we carried on I wouldn't be sitting indoors… when we finished I tried to keep it up but I find it too hard to get out and about on my own, it was easier when [Lifestyle coach] was here with me, he just made it easier… [Amosa, Cook Island male participant]*

The following participant talked about the importance of on-going support and encouragement to help her stay motivated:

> *Some people just need encouragement and support – we can't all do it alone, sometimes we just need to have an extra person along the journey… we need encouragement and a little push to get there… if there was some follow-up it would be good too, even if it's just to pop in and say hello that would be lovely… [Selina, Fijian female participant]*

Profile of the programme

There are high rates of referral from secondary and tertiary cardiac rehabilitation services and also self-referrals. When the programme began, it was delivered by Tamaki Health PHO. As a PHO, there was access to clinics and most of the referrals (especially Pacific referrals) at that time were received from GP clinics. Discussions with the programme staff indicated that referrals from primary care providers have decreased significantly in recent years mainly due to a breakdown of relationships with many of the clinics that existed before the merging of Tamaki Health PHO and Te Kupenga o Hoturoa PHO. The Auckland District Health Board Cardiac Rehabilitation Service is the main source of referrals, and the programme team indicated that following an internal audit of the Auckland District Health

Board service in 2011 that recommended automatic referral of Maori patients to the programme, Maori referrals have increased considerably.

A lack of awareness at primary care level was identified as one of the challenges in obtaining patient referrals. Therefore, there is a need to raise the profile of the programme to try to address this concern. At the moment, it is the responsibility of the programme team to market and build relationships with other health service providers. Although some efforts have been made by the programme team to re-establish links with primary care providers such as Ngati Whatua o Orakei Health Services, this was identified as a challenge for the programme team in terms of time, confidence and skills.

Another reason that could contribute to low Pacific referral rates also identified by the Lifestyle Coach is a misunderstanding amongst health providers regarding eligibility. Because it is delivered by a Maori organisation, there could be misunderstandings that it is open only to Maori patients. Moreover, when the service first began, most of the marketing was aimed at increasing Maori attendance with very little emphasis placed on high needs populations. Strategies promoting the inclusion of high needs populations with an emphasis on Pacific peoples was identified by the Lifestyle Coach as being one possible way to address this. Furthermore, the misunderstanding that the service is for Maori patients only can also impact on Pacific patients desire to participate in the programme. For example, if they do not know that the programme is available to Pacific people, they may feel uncomfortable being a part of a programme they think is targeted at Maori.

Staff shortages

The absence of a Whanau Ora Worker due to illness and later resignation was identified by the Lifestyle Coach as a challenge during much of the evaluation period (July 2012-January 2013). It was the responsibility of the Whanau Ora worker to undertake initial consultations to pre-screen for any social concerns before the cardiac rehabilitation programme is implemented, as well as administrative duties. These responsibilities were undertaken by the Lifestyle Coach when the FTE was vacant, increasing his workload.

Data collection and programme documentation

Discussions with the programme team indicated that robust data collection is an on-going challenge. Time constraints due to heavy workloads and a lack of understanding of the importance of documenting work, has resulted in gaps in recorded data. Programme documentation and updating patient files was also raised as a challenge – fourteen patients that were referred and on file as being on the programme have not been able to be located. A delay in the implementation of a new database has meant that the programme team are manually keeping records. This has made it difficult to ascertain accurate numbers of: people being referred to the service; people who have declined the service; people who

have accepted the service; and people who have completed the service (including how many weeks they were on the programme). There is also no record of how many times people were contacted before being discharged from the service.

Process evaluation summary of key points

What are the key aspects that contribute to Pacific participation and completion in the programme?

Programme reach

- There are a low number of Pacific referrals received from primary and secondary care providers.
- Fifty percent of Pacific patients referred to the programme completed the programme.
- Fifty percent of Pacific patients referred to the programme were unable to be contacted.

Participation and completion issues

- Accessing patients in the first instance can be difficult due to the inability to contact via telephone or home visit.
- Language barriers were identified as a challenge to engaging with Pacific participants and accessing interpreter services from the Auckland District Health Board is difficult.
- One participant reported that he was still waiting for a follow-up call from the programme team to set up an initial visit.
- One participant reported that because he was feeling better after his surgery he did not need to be involved in a programme.

What aspects of the programme worked well?

- The home-based programme was ideal for the participants that completed the programme. One participant had no access to transport and another participant found it physically difficult to leave the house.

- Tailoring the programme to meet participants' individual needs allowed them to work on health areas that they prioritised and felt they needed, allowing the programme to be designed at an appropriate level of fitness and skills.
- The supportive, respectful and gentle manner of the Lifestyle Coach was identified as a major strength of the programme as it encouraged participants to engage in the programme.
- Understanding the importance of providing a culturally appropriate service for Pacific participants alongside programme staff efforts to try to promote this has resulted in more engagement with Pacific patients.
- The programme team have an extensive network of community health and social services that enables them to link patients with multiple support services.

What aspects of the programme can be improved?

- Participants felt that the duration of the programme was inadequate to support the maintenance of long-term behavior change and that on-going support was required.
- A lack of awareness at primary care level was identified as one of the challenges in obtaining patient referrals.
- A lack of awareness amongst referral sources and Pacific peoples regarding eligibility was identified.
- Language barriers and accessing interpreters.
- Contacting Pacific patients was identified as a major challenge when engaging with Pacific patients.
- Staff shortages, particularly during the evaluation period, impacted on the ability of the programme to be delivered as planned.
- Limited and non-systematic data collection impacts on the ability to ascertain accurate utilisation data, referral data, completion data and the number of visits being made to patients.

Outcome evaluation findings

The following section presents the outcome evaluation findings. The following short-term outcomes are discussed: Pacific participants understand cardiovascular disease and management of cardiovascular disease; and whanau know how to prevent cardiovascular disease. Progress towards achieving the following medium term outcome: Clients and whanau manage cardiovascular disease is also discussed. It was not possible within the scope of this evaluation to determine whether long-term outcomes were met.

To what extent have the outcomes been achieved?

Short-term outcomes

Pacific participants understand cardiovascular disease and management of cardiovascular disease

Participants reported increased understanding of the importance of weight management through healthy eating and exercise to manage cardiovascular disease:

> *[Lifestyle Coach] told me the same things we were learning about food for my heart would also help me control my diabetes and my diabetes it's controlled now through eating and taking the pills but mostly it's through the food I eat… I only have meat like once a week but I mostly eat vege dishes and fish… for breakfast always weetbix or porridge… [Amosa, Cook Islands male participant]*

Participants also reported skills that they learned from the programme helped them manage their weight:

> *With [Lifestyle Coach] he came in to do our exercise, and there were these little exercises that could be helpful that you don't have to go out and about you can do it at home like he showed us how to put a bottle of water as a weight placed on your feet or for lifting… those easy things can help us… and he also taught me, I used to see people reading the back of the food the labels but I just ignored them… but then he sat me down and he said read, read this thing this means this and this means this and this means this and I found very interesting so every time I go shopping now I always read everything like how much sodium how much fat you know… [Selina, Fijian female participant]*

Whanau know how to prevent cardiovascular disease

Two interviews were undertaken with patients who had completed the programme. One of these interviews was with a married couple who had completed the programme together and could articulate the risk factors that contributed to cardiovascular disease and the steps they could take to prevent cardiovascular disease:

> *The good foods and the bad foods you know… I also needed to control my eating you know… and increase my exercise too because that would all go towards me getting my weight under control so I continue to get healthy and take care of my heart… [Selina, Fijian woman participant]*

The other interview participant articulated that his whanau was not involved in the programme and he was not sure whether or not they were aware of how to prevent cardiovascular disease.

Medium-tem outcomes

Clients and whanau manage cardiovascular disease

Some participants reported that they managed to maintain some of the lifestyle changes they made during the programme. The following participant reported that although her husband was able to maintain his exercise plan, she had not been successful in doing so. She also discussed the challenges that she and her husband faced when attempting to eat healthy food:

> *My husband does a lot of walking… from here to the town centre and back… he walks every day for one hour…during the cold months he would probably only walk two to three times a week... when we get the car we go to Bunnings it's really big… he's all over the place… and he walks right around a few times… I must be honest with you, I have not kept up with my exercise and I must say that I have failed in my nutrition too, I have failed myself but you know we need to take into consideration that things are expensive especially the things that are good for us… like it's hard not only for me and my husband but also for other people too they don't have access to the money to buy that food… they need to fill their tummy… and we just buy the tinned stuff that is cheap when we should be eating fresh food, it's not easy because of the expenses… that is one of the things that I've noticed the food is very expensive… during the summer it's okay you get all the fruits and all that but in the cold weather the cheap things are the bread and even the brown bread is quite expensive and we have to really think hard about buying things… [Selina, Fijian female participant]*

Conversely, the following participant found that while he was able to adhere to healthy eating, he had not managed to maintain his physical activity and exercise:

> *I think it was sad we stopped because I was really getting into it… I think if we carried on if I was still doing it now I would be better physically… I try to go for a walk just down to the corner and back but I am so tired and then I just find it hard to do on my own [Amosa, Cook Islands male participant]*

Outcome Evaluation Summary of Key Points

To what extent have the outcomes been achieved?

Success in achieving intended short term outcomes

Pacific participants understand cardiovascular disease and management of cardiovascular disease

- Participants reported increased understanding of the importance of weight management through healthy eating and exercise to manage cardiovascular disease.
- Participants learned skills for weight management.

Whanau know how to prevent cardiovascular disease

- One participant reported that she and her whanau were aware of the risk factors for cardiovascular disease and strategies on how to prevent cardiovascular disease.

Progress towards medium term outcomes

Clients and whanau manage cardiovascular disease

- Some participants are maintaining healthy eating lifestyle changes.
- Some participants are maintaining physical activity.

Concluding comments

A limitation of this evaluation is that as we were only able to interview 4 out of an anticipated 9 interviews, it is possible that some stories were not captured.

Findings indicate that Pacific patients who completed the programme increased their understanding of cardiovascular disease and management of cardiovascular disease. Participants reported increased understanding of the importance of weight management through healthy eating and exercise. They learned skills to help them choose and eat healthier foods and ways in which they could increase their physical activity in a safe way. While initial progress towards managing their cardiovascular disease was made (particularly during the programme), the maintenance of these changes were difficult to sustain without the on-going support of the Lifestyle Coach. Participants reported some lifestyle changes in relation to healthy eating and increasing their physical activity.

Major strengths of the programme include: home-based delivery (including participants who may not be able to attend community or hospital-based programmes); individual programmes to suit individual needs; supportive and respectful attributes of the Lifestyle Coach that allowed participants to feel comfortable and motivated to engage in the programme; the efforts of programme staff to provide a culturally appropriate service for Pacific participants; and the extensive network of community health and social services available for participants if required.

There have been challenges in relation to programme reach with a low number of Pacific referrals received from primary and secondary sources. Factors identified as contributing to this include: a lack of awareness of the programme amongst primary care providers; and a lack of understanding that Pacific peoples are also eligible for the programme. For the 2012 calendar year, 50% of Pacific participants that were referred to the programme completed the programme. The remaining participants were unable to be contacted.

Factors that could impede on participation and completion were highlighted in the process evaluation. These include: difficulty in accessing Pacific patients; language barriers that impact negatively on the programme staff's ability to engage with Pacific patients; and perception of need. A number of programme implementation challenges have been highlighted: limited programme resources to support the delivery of the programme; limited and non-systematic data collection and documentation of programme referral, uptake and completion data to monitor performance; and staff shortages that impact on the ability to deliver the programme as planned.

Overall conclusions

Across the three case studies key learnings for programme providers were identified along with key aspects that contribute to the effectiveness of programmes for Pacific peoples, and improved participation and completion of cardiac rehabilitation programmes.

A major challenge for all programmes is attendance and completion. Although definitions of completion rates vary between programmes, Pacific peoples had low rates of attendance and completion. This is an area needing immediate attention. The findings show a number of barriers that impact on Pacific patients' participation and completion of the programmes. These include: language barriers; complexity of health issues; transport; family and other commitments; location; and returning to work. Patient perception of need is an area of concern and was raised by a number of participants that did not attend the programme. They believed that they received adequate information from clinical experts regarding their heart condition or felt well and therefore did not need to attend a cardiac rehabilitation programme. Patients who said they would attend but did not may have agreed out of politeness, not seriously considering attending. There is an opportunity for cardiac rehabilitation staff to address these issues early on in the referral process by clearly identifying how the programme could be useful, making them feel welcome, allowing concerns to be raised and providing options e.g. day or evening sessions and home based visits.

Improved and systematic data collection with regular monitoring of both data (e.g. Pacific referrals, attendance and completion) and programme effectiveness is also required. The evaluation also identified limited programme resources to support the delivery of the programmes.

When programmes are delivered appropriately there is evidence of effectiveness. Findings show that it is important to deliver cardiac rehabilitation programmes that are specifically aimed at Pacific peoples rather than providing generic programmes. Providing information that is relevant to the needs of participants, including Pacific worldviews, values and experiences, in a variety of Pacific languages and communicated in a way that assists comprehension with clear explanations of medical terms contributes to programme effectiveness and engagement. Who is delivering the programme is also important. Pacific staff play an essential role that contributes to participants feeling relaxed and accepted. In addition, the presence of Pacific staff may improve attendance, evidenced by reduced attendance at the Pacific Healthy Heart Programme when the Pacific Cultural Resource Unit was temporarily unavailable. More broadly, friendly and supportive staff promoted engagement by Pacific participants and helped motivate them to make changes. Pacific participants reported increased knowledge and understanding of their heart condition and factors that influence wellbeing and heart health. A range of changes were discussed

including healthy food choices and exercise. Learning alongside other Pacific participants enhanced comfort levels, promoting the sharing of experiences and strategies to implement healthy changes. However, the relatively short duration of the programmes was raised and participants expressed the need for longer term support in order to maintain positive changes.

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