



# One Heart Many Lives

## Evaluation Report

Group A2

Fourth Year Medical Students

Public Health Project

Wellington School of Medicine and Health Sciences (WSMHS)

The University of Otago

June 2011

### Project Authors:

NURULAIN MOHD ARIF LEOW, AHMAD BUKHARI MUHAMMAD NOR, QI HAO ONG, CRISPIN OVENDEN, CAITLYN O`FALLON, CAITLIN O`ROURKE, ARI PFEIFFENBERGER, JESSIE ROWSELL, AMRIT SINGH, EMMA STEVENSON, SUE TODD, GEOFF WHITE, CLARE WILSON, ALEX WYNNE.

## Contents

Contents .....	2
Acknowledgements .....	<a href="#">555</a>
Executive Summary .....	<a href="#">666</a>
Background .....	<a href="#">101010</a>
Who are PHARMAC? .....	<a href="#">101010</a>
Description of the Programme .....	<a href="#">101010</a>
Programme objectives .....	<a href="#">111111</a>
Previous evaluations of the OHML Programme .....	<a href="#">131313</a>
Our Evaluation .....	<a href="#">151514</a>
Literature Review .....	<a href="#">171717</a>
Heart Disease in New Zealand .....	<a href="#">171717</a>
Inequalities and Heart disease .....	<a href="#">171717</a>
Cardiovascular Risk Assessment .....	<a href="#">171717</a>
Management of Cardiovascular Risk Factors .....	<a href="#">181818</a>
Statins for cardiovascular risk reduction .....	<a href="#">191919</a>
Treatment Gap .....	<a href="#">202020</a>
Health Promotion .....	<a href="#">202020</a>
A Māori model of Health Promotion .....	<a href="#">212121</a>
Cardiovascular Health Promotion .....	<a href="#">232323</a>
Methodology .....	<a href="#">262626</a>
Community/Patients Group .....	<a href="#">262626</a>
Primary Health Group .....	<a href="#">272727</a>
DHBs/PHOs .....	<a href="#">282828</a>
Research Findings .....	<a href="#">303030</a>
Community Group .....	<a href="#">303030</a>
Demographics .....	<a href="#">303030</a>
Knowledge about the One Heart Many Lives Programme .....	<a href="#">313131</a>
Heart Checks .....	<a href="#">323232</a>
Determinants of Heart Disease .....	<a href="#">343434</a>
Assessment of Health Literacy .....	<a href="#">363636</a>
PRIMARY CARE .....	<a href="#">404040</a>
Demographics .....	<a href="#">404040</a>

Knowledge about the One Heart Many Lives Programme .....	<a href="#">414141</a>
Areas for improving the OHML programme .....	<a href="#">424142</a>
Current tools used for Cardiovascular Risk Assessment .....	<a href="#">444144</a>
Strategies used with Māori and Pacific Island Males.....	<a href="#">454145</a>
Impact of OHML on Practice.....	<a href="#">464146</a>
Nurses .....	<a href="#">474147</a>
DHBs/PHOs Group.....	<a href="#">474147</a>
1. Access to health care for high needs groups and the most deprived .....	<a href="#">474147</a>
2. Re-orienting primary care to provide cardiovascular risk for high needs groups.....	<a href="#">484148</a>
3. Barriers to successful health promotion initiatives .....	<a href="#">484148</a>
4. The funding model.....	<a href="#">494149</a>
5. Prioritisation of health promotion initiatives.....	<a href="#">504150</a>
6. Social marketing.....	<a href="#">514151</a>
7. Community based initiatives.....	<a href="#">514151</a>
8. Flexibility to adapt a national campaign to local circumstances.....	<a href="#">524152</a>
9. Conflict and co-operation between different parts of the health workforce.....	<a href="#">534153</a>
Discussion .....	<a href="#">544154</a>
Community Group.....	<a href="#">554155</a>
Primary Care .....	<a href="#">574157</a>
DHB and PHO feedback.....	<a href="#">584158</a>
Strengths of this evaluation .....	<a href="#">614161</a>
Research Limitations .....	<a href="#">614161</a>
Overall limitations.....	<a href="#">614161</a>
Cultural Limitations.....	<a href="#">614161</a>
Timeframes.....	<a href="#">624162</a>
Location.....	<a href="#">624162</a>
Data Quality .....	<a href="#">624162</a>
Selection Bias .....	<a href="#">624162</a>
Recall bias.....	<a href="#">634163</a>
Interviews and Surveys with Doctors/Nurses .....	<a href="#">634163</a>
Interviews with members of the public - Intercept Surveys .....	<a href="#">634163</a>
Recommendations .....	<a href="#">644164</a>
1. Recommendations for the OHML programme .....	<a href="#">644164</a>
2. Wider Health Sector Recommendations.....	<a href="#">664166</a>

3. Recommendations for future research and evaluation .....	<a href="#">674167</a>
Conclusion.....	<a href="#">684168</a>
References.....	<a href="#">724172</a>
Appendices: .....	<a href="#">764176</a>
Appendix A: Search strategies for Literature Review .....	<a href="#">764176</a>
Search strategy for evidence for statin use .....	<a href="#">774177</a>
Appendix B: Community Intercept Survey .....	<a href="#">794179</a>
Appendix C: Community Leaders Questionnaire .....	<a href="#">824182</a>
Appendix D: List of CCDHB General Practitioners in Porirua .....	<a href="#">834183</a>
Appendix E: Primary Care invitation for research participation.....	<a href="#">854185</a>
Appendix F: Primary Care research Participant consent form.....	<a href="#">864186</a>
Appendix G: Primary Care Survey for GPs.....	<a href="#">874187</a>
Appendix H: Primary Care Survey for Nurses.....	<a href="#">904190</a>
Appendix I: DHB/PHO semi-structured interview questions.....	<a href="#">944194</a>

## Acknowledgements

We would like to thank the General Practitioners (GPs), nurses, health care workers, public servants and members of the public who participated in our research. Furthermore, we would like to thank the One Heart Many Lives team at PHARMAC for their support and guidance in the development of this project.

Finally we would like to thank our supervisors Dr Richard Jaine, Professor Richard Edwards and Professor Tony Blakely for their feedback and mentoring during all aspects of this evaluation.

## Executive Summary

Developed in 2002 by PHARMAC, One Heart Many Lives (OHML) aims to reduce the risk of cardiovascular disease in Māori and Pacific Island males by addressing inequalities in statin prescription. The programme targets multiple levels of the health sector via social marketing campaigns, community provider projects and collaboration with District Health Boards (DHBs) and Primary Health Organisations (PHOs) to implement cardiovascular risk reduction strategies.

We wanted to evaluate OHML from three perspectives: the community, Primary Care, and DHB/PHO levels. Our research questions were:

- What is the level of community awareness of OHML in Porirua?
- What is the impact of OHML on General Practitioners (GPs) and nurses?
- How do programmes like OHML fit into the work of DHBs and PHOs to improve population health?

## Literature Review

Cardiovascular disease (CVD) is a leading cause of morbidity and mortality in New Zealand (1). Māori and Pacific Island men are disproportionately affected, with Māori ischaemic heart disease (IHD) mortality twice that of non-Māori (2). Māori are also more likely to have multiple CVD risk factors, but less likely to be appropriately managed in primary care (2). The use of statins to improve lipid profiles is a core component of a number of cardiovascular risk management guidelines worldwide (3). Despite this, there is a significant gap between the number of New Zealanders who would benefit from statin treatment, and the number who receive treatment (4). Māori are particularly poorly represented. This gap is the motivating force behind the OHML programme (24).

## Methods

We focused on three areas of the health sector: communities, Primary Care and DHBs/PHOs.

- **Community-** A survey was designed to assess: participant's cardiovascular risk assessment (CVRA) status; awareness of OHML; and, cardiovascular health

literacy. A second survey was designed for key Māori and Pacific Island Community Leaders assessing: awareness of OHML; its effectiveness and value to the community; and broader issues such as potential reasons for poor health in the local community.

- **Primary Care** - GPs and nurses in the Porirua and the Cannons Creek area were surveyed to assess: knowledge and understanding of OHML; opinions about the programme; their approach to cardiovascular risk assessment.
- **DHBs/PHOs** - semi-structured interviews were conducted to assess how staff involved in health promotion view the place of programmes like OHML in the health system; and to explore OHML's place in the context of other population health efforts.

## Results

At the community level there appears to be limited knowledge of OHML. Our survey found one individual who had participated in the programme, he regarded it as a positive experience. The majority of community participants had poor health literacy in relation to cardiovascular disease though it was encouraging to find that participants had some understanding of the determinants of heart disease. Knowledge of the OHML programme at the level of Community Leaders was also limited.

At the Primary Care level, the majority of GPs had heard of OHML but levels of knowledge varied. GPs who had heard of OHML identified a number of strengths and weaknesses with the programme. All GPs described a number of strategies they used to increase compliance amongst Māori and Pacific Island males; these did not differ from standard consultation techniques used for other ethnic groups. While the nurse survey did not generate any responses, this is a key area for future research to focus on.

DHB and PHO interviews revealed the following themes:

- OHML is successful in overcoming access barriers for high needs groups.
- Resources are a significant limitation on what can be achieved in health promotion.
- There is a lack of continuity in health promotion messages.
- The strong community basis for OHML is very successful.
- The national brand allows flexibility to adapt to local population needs.

## Recommendations

Overall we found that OHML is a successful programme but there is room for improvement. Recommendations for the programme include:

- Continue the strong focus on community engagement
- Continue to involve and inform community leaders
- Continue to build awareness of the programme in the community
- Integrating OHML with other components of the healthcare system. For instance by building links to healthy public policy which targets CVD.
- Strengthen the long term sustainability of OHML in individual communities
- Build ongoing evaluation of OHML into the programme
- Utilise existing data to determine whether OHML has achieved its intended outcomes
- Continue to build on the success of whānau engagement

## Conclusions

- One Heart Many Lives rests on sound theoretical foundations.
- One Heart Many Lives has a high profile with PHO and DHB staff involved in health promotion and population health.
- There is a consensus amongst PHO and DHB staff that it addresses a high priority issue. It has a lower profile with members of the public.
- It features a relentless focus on community engagement.
- One Heart Many Lives succeeded in generating a surge of demand for cardiovascular risk assessment (CVRA)
- The diverse array of social marketing tools used by One Heart Many Lives is recognised as highly effective, and is admired.
- One Heart Many Lives can prompt a reconfiguration of primary care services to enhance cardiovascular risk screening.
- There are strong concerns about the funding model for One Heart Many Lives and for health promotion in New Zealand more generally.



- GP respondents noted that One Heart Many Lives was not embedded in primary care
- One Heart Many Lives combines national health priorities and concentrations of expertise with local input and control.
- There is room for more evaluation of One Heart Many Lives.
- Programmes like One Heart Many Lives can boost performance in the PHO sector.
- GP charges can prevent people from accessing the health system.
- The primary care sector is operating at full capacity.
- GP, PHO and DHB contacts all agree that the funding model for health promotion in New Zealand sets it up to fail.
- The priorities of health promotion efforts change too frequently.
- Re-apportioning capitation funding to pay for population health initiatives, including health promotion, is an uphill task.
- Where funding can not increase, productivity improvements are the only solution.

## Background

This report documents our evaluation of the One Heart Many Lives (OHML) programme developed by PHARMAC in 2002 (5). OHML aims to increase awareness of and reduce inequalities in cardiovascular risk and heart disease in Māori and Pacific Island communities. The focus is on Māori and Pacific Island men aged 35 years and older (5-7). The programme addresses these goals through a range of interventions. Several of these take a 'bottom up' or grass roots approach focused on community based primary prevention. Other important components of the programme include nurse training for cardiovascular risk assessment and the encouragement of service reconfiguration in primary care. This will help to improve treatment for cardiovascular risk, including appropriate medication prescription (5, 7).

Our evaluation, framed as a pilot study due to a short timeframe, has three aims:

1. To assess OHML with a focus on Porirua, where OHML events have been implemented.
2. To discuss our findings with a view to making recommendations for OHML.
3. To guide future evaluations with a set of recommendations based on the experience from this evaluation.

### Who are PHARMAC?

PHARMAC is the Pharmaceutical Management Agency of New Zealand that was set up in 1993 (8). Under the New Zealand Health and Disability Act 2000, it was re-established as an independent Crown Entity and is now accountable to the Minister of Health (8). PHARMAC has various roles within the health sector including management of the pharmaceutical budget for District Health Boards, making decisions about pharmaceutical funding, promotion of optimal use of medicines and improvement of patient access (8, 9). This involves patient information campaigns and other initiatives of which One Heart Many Lives is an example (8).

### Description of the Programme

In April 2002, the Special Authority requirements for statins were removed following a reduction in their price which meant that statins were more affordable to the New Zealand Government (5). Regional data on statin uptake showed large variations in the use of

statins by eligible patients (10). The groups with the lowest statin uptake were Māori and Pacific Island men, who are known to have high rates of cardiovascular disease. This gap between need and treatment gave impetus to the development of OHML (5, 10, 11).

One Heart Many Lives is based on the 2003 Guidelines on Assessment and Management of Cardiovascular Risk. It incorporates three phases:

- **A social marketing campaign** which is based on recognition of the fact that cardiovascular disease affects not just the individual but whanau, friends, and the roles and responsibilities of the person in the community. The campaign ran over a three month period in 2003 and was piloted in Gisborne and Porirua. The success of these pilots lead to its introduction in Northland, Auckland and the Central North Island in 2004 (5).
- **Community provider projects** were run in Porirua and Gisborne in 2005 to screen Māori and Pacific Island men and enrol them in risk reduction programmes (5).
- **Collaboration with DHBs** to implement cardiovascular risk reduction strategies (5).

### Programme objectives

The One Heart Many Lives programme has several objectives:

- *“To increase the awareness of cardiovascular disease, risk and how this risk can be reduced”*
- *“To promote increased consultation between people with high cardiovascular risk and medical professionals”*
- *“To promote healthy lifestyle as part of managing overall healthcare”*
- *“To increase the level of understanding of the need for long-term usage of cholesterol lowering medication (i.e.: statins), for those at highest risk for whom lifestyle measures alone are not sufficient”*

- “To promote the utilisation of cost-effective and appropriate pharmaceutical interventions (critical appraisal of social marketing approach)” (6).

The One Heart Many Lives programme uses four strategies to try and achieve these objectives:

- **Workforce development/development of people.** This strategy aims to improve “best practice” among health professionals. The use of Best Practice Journals and provision of training programmes such as *He Rongoa Pai*, *He Oranga Whānau* enhance the confidence of those working in a community setting (7). By working with local iwi and hauora groups, the reach and effectiveness of health and lifestyle education has been magnified. OHML works with community leaders to inspire, educate and korero with people and health professionals about cardiovascular disease (5).
- **Social marketing initiatives.** This aims to influence the voluntary behaviour of individuals through reinforcement of incentives and/or consequences (6). This approach embodies the values and kaupapa of One Heart Many Lives (5). An example of this is the use of billboard advertising and media campaigns (Māori and Pacific radio, sponsorship of local sports teams and visual aids). These help to promote positive role models for Māori and Pacific Island men, raise awareness of heart disease, and inspire men to make positive lifestyle changes (2).
- **Community involvement.** Individual communities can adapt the programme to their local resources and local priorities to develop their own cardiovascular risk reduction strategies (5, 7). The patient focus group “Brofiles” (Northland, 2007) is an example of such an initiative (12).
- **Developing partnerships.** In 2009 a move was made to implement OHML at a national level with the participation of non-governmental, commercial and iwi organisations. The establishment of these partnerships aims to increase the awareness of OHML in key demographic groups (2).

Ideally the One Heart Many Lives programme would be nationally implemented, whilst maintaining high levels of community engagement and supporting local initiatives (5, 7).

## Previous evaluations of the OHML Programme

The OHML programme has been evaluated several times since its inception in 2002. Prior evaluations include:

### **An evaluation by CBG Health Research Ltd. (2003)**

This looked at the social marketing campaign piloted in Porirua and Gisborne in 2003 (11). The aim was to assess whether OHML had any effect on statin prescription in these areas and to evaluate differences in statin prescription rates in Māori and Pacific Island males relative to control areas. An increase was found in the number of Māori (extra 6.4 patients per 1000 per annum,  $p < 0.05$ ) and Pacific Island (17.4 patients per 1000 per annum,  $p < 0.05$ ) males starting statin treatment during the three month intervention period. This was associated with a decrease in cardiovascular risk in these patients, with a more significant risk reduction in the low CVD risk group compared to the high CVD risk group. This evaluation concluded OHML was successful in increasing statin prescription in the targeted ethnic groups (11).

### **FCB New Zealand Ltd: Pre- and Post- Campaign Social Marketing Research (2004)**

This research was conducted in Auckland and the Central North Island. Men of various ethnicities were surveyed before and after the initiation of a OHML social marketing campaign (5). The primary goal was to develop pre-testing concepts to further the campaign by examining attitudes and behaviors within target populations. The surveys assessed whether Māori and Pacific Island men regarded cardiovascular risk as an important part of overall health. They also evaluated the target population's awareness of OHML and its key messages. After the campaign there was greater consideration of heart disease as an important health problem that was relevant to both Māori and Pakeha men. Pacific Island men also showed an increased awareness of heart disease as a significant health problem but regarded diabetes a bigger concern. In addition, there was no identified increase in the perceived personal relevance of heart disease to Pacific Islanders. The research found that approximately 50% of Māori and Pacific Island men surveyed knew of the campaign. It showed that those aware of the programme were more likely to acknowledge heart disease as the most important problem for their age. They also had a

greater knowledge of lifestyle strategies to reduce cardiovascular risk. However, the overall understanding of cardiovascular disease had not changed and remained poor after the campaign. There was also a failure to implement follow up with blood pressure and lipid screening as a means to reduce heart disease (5).

#### **A PHARMAC Evaluation by Sinclair (2006):**

This evaluation used key informant interviews with District Health Boards (DHBs), Primary Health Organisations (PHOs), community health services, the National Heart Foundation and Sport and Recreation New Zealand (SPARC) to assess how OHML was viewed by the wider health sector (5). Overall, OHML was regarded as an effective way to reduce cardiovascular risk in its target population. The report recognised some areas for improvement in the programme, including:

- Improved communication with health providers
- Improved engagement with DHBs and PHOs
- Involvement of Primary Care services in screening and health promotion
- Ensuring continuity of the OHML pilot initiatives
- Continuing education and support (5).

#### **Critical appraisal of the One Heart Many Lives social marketing programme (2008):**

A critical appraisal was carried out in 2008 to assess revised social marketing techniques, which had integrated knowledge and recommendations from the 2006 evaluation (6). The research found that the social marketing strategy is effective in engaging Māori and Pacific Island men to reduce their cardiovascular risk. Key strengths of the programme included its use of male role models, targeting of high risk populations, local community delivery, collaboration between national and local health organisation and education of health professionals. Weaknesses identified included the exclusion of other populations such as women, the focus on individual and social strategies as opposed to societal and structural (e.g. addressing cardiac surgery waiting lists etc) and a lack of both generalisability and DHB involvement in the pilots (6).

## Our Evaluation

The objectives of this evaluation are:

- To assess the effect of One Heart Many Lives in the target Porirua community
- To provide recommendations to potentially improve the effectiveness of this program
- To act as a guide for a future and more in depth evaluation.

<b>Dimension</b>	<b>Aims</b>	<b>Research Question</b>	<b>Tools</b>
<b>Statin data</b>	To obtain descriptive data on the pattern of statin use in New Zealand.  To assess if statin use has changed as a result of OHML	For use in the projects introduction and to address the question: How has statin use changed since OHML was implemented?	Descriptive Statistics- PHARMAC database  Statistics- PHARMAC database
<b>Community and Community Leaders</b>	To assess if OHML is reaching its target population	What is the level of community awareness of OHML?  Is OHML reaching the community or just individuals?  How involved are Community Leaders with OHML?	Intercept surveys in Porirua  Key Porirua Community Leader focus group interviews
<b>Primary Care</b>	To assess how OHML has impacted on the provision of primary care	What is the impact of OHML from the perspective of GPs?  What is the impact of OHML from the perspective of nurses?	Semi-structured interviews at GP clinics in Porirua  Written surveys
<b>DHBs and PHOs</b>	To determine how OHML fits into DHB and PHO work to improve population health	How does OHML fit into the health system, including the delivery of other population health services and health promotion efforts?	Semi-structured interviews with key stakeholders in Regional Public Health, DHBs and PHOs in the Wellington Region (CCDHB, HVDHB, WDHB)



# Literature Review

## Heart Disease in New Zealand

Cardiovascular disease (CVD) is a leading cause of morbidity and mortality in New Zealand, with ischemic heart disease (IHD) alone responsible for nearly 20% of deaths in 2008 (1). The chronic nature of cardiovascular disease means that morbidity is even greater. Fortunately, coronary deaths have fallen by over 60% since their peak in 1960 (13).

## Inequalities and Heart disease

Māori and Pacific Island men are disproportionately affected. Although IHD mortality has declined in these groups over recent years, the fall has not been as steep as for NZ European and other ethnicities. This is due to a number of factors including greater tobacco use, obesity, and socioeconomic deprivation (14).

In addition to disparities in risk factors between Māori and non-Māori, Māori experience barriers to receiving appropriate health care for cardiovascular disease. Māori IHD mortality is twice that of non-Māori, yet Māori are hospitalised only 1.4 times as frequently. Māori are also more likely to have multiple CVD risk factors, but these are less likely to be identified and managed in a primary care setting (2).

## Cardiovascular Risk Assessment

According to the New Zealand Guidelines Group, a thorough cardiovascular risk assessment should be performed in the following groups (3):

- All men from the age of 45
- All women from the age of 55
- Māori, Pacific and Indian men from the age of 35
- Māori, Pacific and Indian women from the age of 45
- All people known to have diabetes
- Men with existing known risk factors (e.g. smoking, family history, hypertension or hypercholesterolemia) from the age of 35
- Women with existing known risk factors from the age of 45

These risk assessments should be performed by a health practitioner with appropriate training at the primary care level (3).

Targeted opportunistic screening of groups with a high burden of cardiovascular disease is an efficient way of identifying individuals who would benefit from treatment. There is no evidence supporting widespread screening of individuals outside of these groups (3).

### **Management of Cardiovascular Risk Factors**

Effective primary prevention for ischemic heart disease encompasses both lifestyle and pharmaceutical management (15). For people with a calculated 5-year cardiovascular risk of 10-20%, treatment should usually begin with advice and assistance in modifying lifestyle factors. Drug treatment can be considered if sufficient risk reduction is not achieved. Those with a 5-year risk >20% require immediate pharmaceutical management in addition to lifestyle changes (3).

The New Zealand Guidelines Group recommends a treatment approach which covers seven key aspects (3):

1. Cardioprotective Dietary Patterns
2. Physical Activity
3. Weight Management
4. Smoking Cessation

5. Lipid Modification
6. Blood Pressure Lowering
7. Antiplatelet Therapy (aspirin)

### Statins for cardiovascular risk reduction

One of the drivers for the development of OHML was the low uptake of statins in target populations.

New evidence is continually emerging on the role of statins in primary prevention of CVD. Guidelines developed by the World Health Organisation in 2004 recommended that all individuals with total cholesterol at or above 8.0 mmol/L (320 mg/dL) should be advised to follow a lipid-lowering diet and prescribed a statin to lower the risk of cardiovascular disease (16).

New Zealand Guidelines recommend basing statin treatment on an individual's 5-year cardiovascular risk as well as lipid levels (3).

- Patients with low density lipoprotein (LDL) >8.0 mmol/L or total cholesterol:high density lipoprotein (TC:HDL) ratio >8.0 should receive statin treatment.
- Patients with a 5-year cardiovascular risk >20%, should receive simvastatin 40 mg.
- Patients with a risk <20% requiring statin treatment should be started on 20 mg and the dose titrated up if needed.
- In all cases, lifestyle advice (lipid-lowering diet and physical activity) should continue following initiation of lipid-lowering pharmacotherapy (3, 15, 17).

A number of studies have demonstrated the effectiveness of statins in lowering LDL cholesterol and modestly increasing HDL levels (18-21). Investigation into the effect of statins on coronary events has produced mixed results, but it is generally accepted that statins have value in the prevention of heart disease (20, 22). The effect of statins on all-cause mortality is unclear (19, 22, 23).

## Treatment Gap

Despite recommendations for lifestyle interventions and pharmacotherapy, there is a significant gap between the number of New Zealanders with identifiable risk factors and the number who have undergone formal assessment and treatment (4). This is particularly true of Māori and Pacific Island men. Recognition of the under-prescription of statins in these groups led PHARMAC to initiate the OHML programme (24).

OHML's major focus is to encourage Māori and Pacific Island men to get and act upon 'heart checks'. This includes the provision of brief risk assessments at events such as *Te Matatini National Kapa Haka Festival*. This has the potential to bridge the treatment gap and improve outcomes in this group (25).

## Health Promotion

The landmark publication in the history of health promotion is the *Ottawa Charter for Health Promotion*. The Charter, a strategy for better health promotion around the world, was created in 1986 and signed by world leaders at the First International Conference on Health Promotion in Ottawa, Canada (26). It set out a number of strategies and actions which have remained the foundation of health promotion to this day, including:

1. Building healthy public policy
2. Create supportive environments
3. Strengthening community action
4. Developing personal skills
5. Re-orientating health care services toward prevention of illness and promotion of health (26).

The strategies for achieving action in these areas are (26):

**Advocate:** aim for political, economic, social, cultural, environmental, behavioural and biological factors that favour health (26).

**Enable:** achieve equity in health by empowering people to take control of the determinants of their own health (26).

**Mediate:** mediation between the different interests of many groups and individuals is important to building healthy society (26).

In New Zealand, “collaborative health promotion and disease and injury prevention by all sectors” is one of the key principles that make up the basis of *The Primary Care Strategy* released by the Ministry of Health in 2001 (27).

In 2003, the Ministry of Health published *A Guide to Developing Health Promotion Programmes in Primary Health Care Settings* (28). This guide is aimed at PHOs building health promotion initiatives in partnership with communities and other public health organisations. It gives guidelines on health promotion in the local context. As well as following the principles that apply to health promotion globally, organisations in New Zealand must (28):

- Work with local iwi, hapu, whānau and Māori communities
- Involve Māori at every stage of the planning and delivery of the service
- Link with local Pacific Island communities
- Consider the relationship of the programme to the principles of the Treaty of Waitangi: Partnership, Participation and Protection (28).

### **A Māori model of Health Promotion**

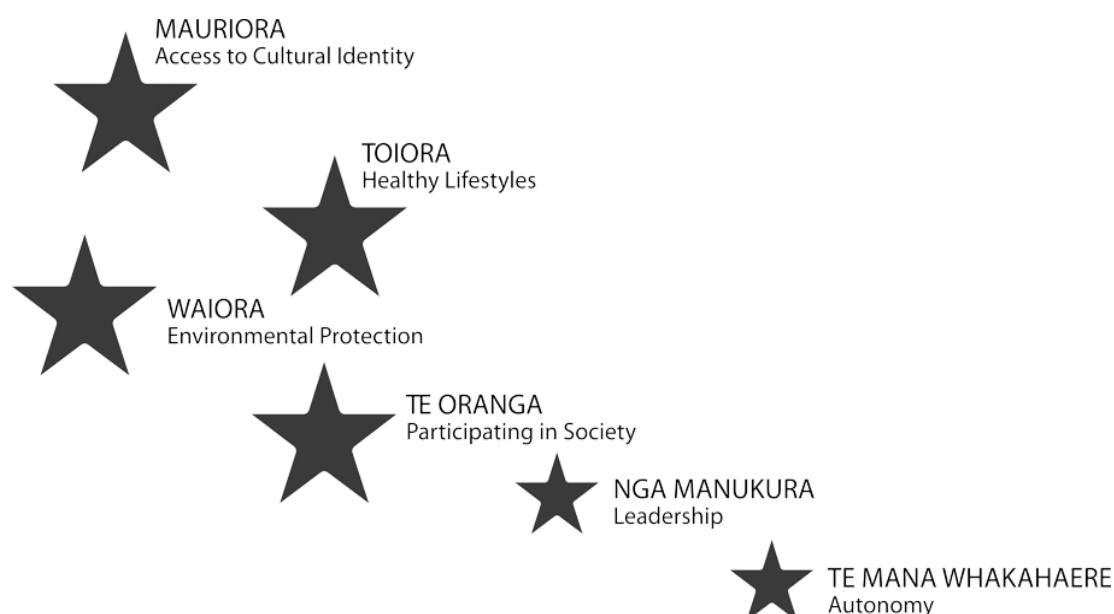
Te Pae Mahutonga is a Māori model of health promotion developed by Professor Mason Durie (29). It is based on the constellation known in English as the Southern Cross and in Māori is Te Pae Mahutonga. The four central stars represent four central concepts:

- **Maurioria/Access to Cultural Identity.** Cultural alienation is associated with ill-health. Accessing Te Ao Māori is an important part of spiritual wellbeing in the Te Pae Mahutonga model. This could

include connecting with a Marae, use of Te Reo or observance of Tikanga Māori (29).

- **Toiora/Healthy Lifestyles.** Māori are more likely than non-Māori to have several unhealthy behaviours, for example smoking and poor nutrition. Changing these patterns is key to improving Māori health (29).
- **Waiora/Environmental Protection.** Māori have traditionally had a strong connection with the land and natural environment. Balancing the wellbeing of the people, Tangata, and the environment is important to a Māori model of health promotion (29).
- **Te Oranga/Participating in Society.** This addresses the wider contexts of health: the workplace, education and participation in activities such as clubs or sports. There are disparities in the access Māori have to many recreational activities as well as in education and employment (29).

The two pointers represent Nga Manukura (leadership) and Te Mana Whakahaere (autonomy). Nga Manukura and Te Mana Whakahaere must happen not only at an individual level but at the level of Whanau, Hapu, Iwi and other communities and organisations (29).



**Figure 1** Te Pae Mahutonga (30).

## Cardiovascular Health Promotion

Heart disease is not a uniquely New Zealand problem. Globally, many governments and organisations have made efforts to address cardiovascular disease in their populations with varying degrees of success (14, 23, 31-40).

The challenge of cardiovascular health promotion is that risk factors associated with cardiovascular disease are often entrenched into lifestyle and culture. Changing behaviours such as diet, physical activity and smoking not only require behaviour change on the part of the individual but involve societal, economic and environmental factors (41).

There are two major approaches to primary prevention of cardiovascular disease: the population strategy and the high-risk strategy (41).

The population strategy aims to alter health behaviours of entire populations and reduce the cardiovascular risk of all individuals. The advantage of this approach is that moderate risk individuals are included in interventions in contrast to strategies that target high risk groups (41). An example of a successful population based strategy is smoking cessation: around 50% of the reduction in heart disease since its peak in the 1960s can be attributed to a corresponding reduction in smoking (42).

The high risk strategy aims more intensive interventions at only a selected group who will benefit most from these interventions (41). One Heart Many Lives is a high risk strategy. Māori and Pacific Island men over 35 are an identified higher risk group and 'heart checks' further identify those most in need of treatment.

In the long term most researchers and policy makers have identified the population based strategy as the one that will make the most difference.

Legislation and public policy may be the most effective methods to alter the cardiovascular risk profile of a whole population (40-45).

Trials of interventions to reduce cardiovascular risk in high risk populations have generally shown small benefits (45). A large (903,000 person-years follow up) systematic review and meta-analysis by Shah Ebrahim and George Davey Smith published in the British Medical Journal found only modest effects for multi-risk-factor interventions (more than one of: smoking cessation, exercise, dietary advice, weight control, antihypertensive drugs, and cholesterol lowering drugs). Their conclusion was that the benefit of these health promotion exercises was in doubt. However, they did find better results when interventions were targeted at very high-risk populations, and concluded that in these groups the interventions had a beneficial effect (45).

A more recent review (2010) which examined workplace-based cardiovascular health promotion also failed to find a significant effect on cardiovascular disease outcomes (39). The interventions in this study were primarily aimed at diet and physical activity. It did find strong evidence for a positive effect on body fatness. Again, it found the effect was stronger for higher-risk groups. The lack of evidence for effectiveness in other measures such as cholesterol and blood pressure control was attributed at least in part to inconsistencies between studies (39).

The study that is perhaps most relevant to One Heart Many Lives is Pennant et. al.'s review of community based programmes for the prevention of cardiovascular disease (31). The 36 programmes in this systematic review were multi-factorial and included elements of marketing, screening and environmental change. The review found positive but non-significant trends in cardiovascular outcomes for most programmes and recommended that this type of programme was worth consideration as a method of cardiovascular risk reduction. This study could not reach any conclusions about which interventions were most effective at the community level due to insufficient data quality (31).



Reviews of the evidence for single-factor interventions such as dietary advice, dietary salt reduction, smoking cessation advice and counselling to improve physical activity and diet confirmed the trend towards small but potentially valuable benefits (43, 44, 46, 47).

Cardiovascular risk assessment itself as a method of cardiovascular disease prevention is currently under review by the Cochrane collaboration (48). Previous research has suggested that assessments similar to the 'heart checks' offered by One Heart Many Lives may have benefits relating to health literacy and attitudes as well as the more obvious advantages of screening (48).

*For details of the search strategy used in this literature review, please refer to Appendix A.*

## Methodology

We focused on three areas of the health sector: communities, Primary Care and DHBs/PHOs.

### Community/Patients Group

We aimed to explore if participants had heard of OHML; determine if they had ever received any form of cardiovascular assessment; and assess the health literacy of participants across a range of cardiovascular related terms.

Intercept surveys were conducted between the hours of 1-4 pm across five separate working days from two consecutive weeks. On each of these occasions we had four students stationed at different locations outside the South entrance to the Porirua Mall. The participants were chosen mainly on their appearance and our own inferences as to whether they were of a Māori/Pacific Island ethnicity and over 35 years old.

We prepared a three-part survey for potential participants (Appendix B). The first part gathered information on participant's knowledge of OHML; the second part asked individuals if they have ever received a heart check; and the third part assessed knowledge on both the determinants of heart disease and the following cardiovascular related terms: blood pressure, heart attack, stroke, cholesterol, statins and diabetes.

We worked individually and approached potential participants with the same introduction, inviting them to be a part of a health study by answering a two minute questionnaire. The surveys were read to the participants to avoid literacy issues and notes were taken. After we had completed 70 surveys from our target demographic, they were then collated and jointly analysed by two members of the group.

Another, more detailed survey was designed for key Māori and Pacific Island contacts to answer (Appendix C). This survey assessed their level of awareness of OHML, their perception of its value and broader issues such as potential reasons for poor health in the local community. Nine surveys were answered by members attending a Kaumatua Council meeting on the 7<sup>th</sup> June 2011 and notes were taken. Two telephone surveys were completed by members of the Pacific Island forum in Cannons Creek on the 9<sup>th</sup> June 2011.

### Primary Health Group

We aimed to assess GPs' knowledge and understanding of OHML; explore their opinions about the programme and their general approach to cardiovascular risk assessment.

Our participants were GPs and Nurses in the Porirua and Cannons Creek area. We contacted two university lecturers/conveners who are involved with the General Practice Department, University of Otago, Wellington and enquired as to the best method to recruit GPs and nurses. We were advised to fax the GP clinics with the initial information and to make follow up phone calls to determine if there were any willing GP or nurse participants. We were also informed of several key contacts that could be used. A fax was then sent to all of the Porirua GP clinics that had been listed on the CCDHB website (Appendix D). This fax explained the project and asked GPs or practice nurses if they were willing to participate in the project (Appendix E). GP clinics that did not respond to the fax were contacted by phone and follow-up information given as requested.

For those participants wishing to be interviewed, a semi-structured approach based on survey questions was used (Appendix F and G). Two students took notes at each interview which were neither recorded nor transcribed. Following the interview, a synopsis was written and later edited by several members of the project group in order to document a faithful account of the views of the interviewee.

We also prepared surveys that consisted of 19 questions based on the GPs' knowledge and understanding of OHML, their attitudes and opinions about the programme and their strategies to cardiovascular risk assessment (Appendix G). One of the suggested contacts volunteered to hand out consent forms and surveys at a non-compulsory peer review meeting for GPs (Appendix F). Participants were given 5-10 minutes at the end of the meeting to complete the survey and submit it. This contact also volunteered to distribute surveys to practice nurses associated with peer review members (Appendix H).

Key themes were extracted from the surveys and interviews and provisional conclusions were drawn by members of the project group.

### DHBs/PHOs

We aimed to evaluate the experience of DHBs and PHOs in the Wellington, Hutt Valley and Wairarapa region with OHML; assess how they view the place of programmes like OHML in the health system; and explore OHML in the context of the delivery of other population health or health promotion efforts.

Semi-structured interviews were conducted with key individuals within these bodies. We approached local DHB's and PHO's and requested an interview with a person who may have some knowledge in the area of health promotion, funding and planning for DHBs. We also approached our project supervisors and other members of the Department of Public Health, University of Otago, Wellington for the contact details of potential interviewees.

We prepared a list of questions to gather information about experiences with OHML, health promotion priorities and the interface between the provision of primary care and health promotion (Appendix I).

The interviews were conducted by members of our project group and lasted one hour. Students took notes at each interview. Following the interview, a

synopsis was written and later edited by several members of the project group in order to document a faithful account of the views of the interviewee.

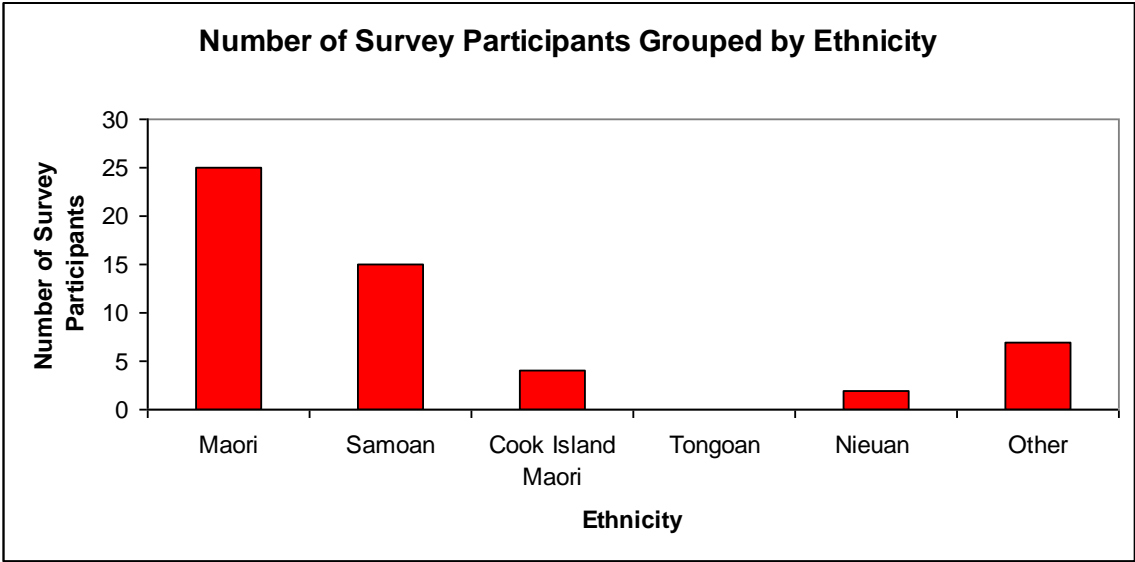
Key themes were extracted from the interview summaries and provisional conclusions were drawn by members of the project group.

# Research Findings

## Community Group

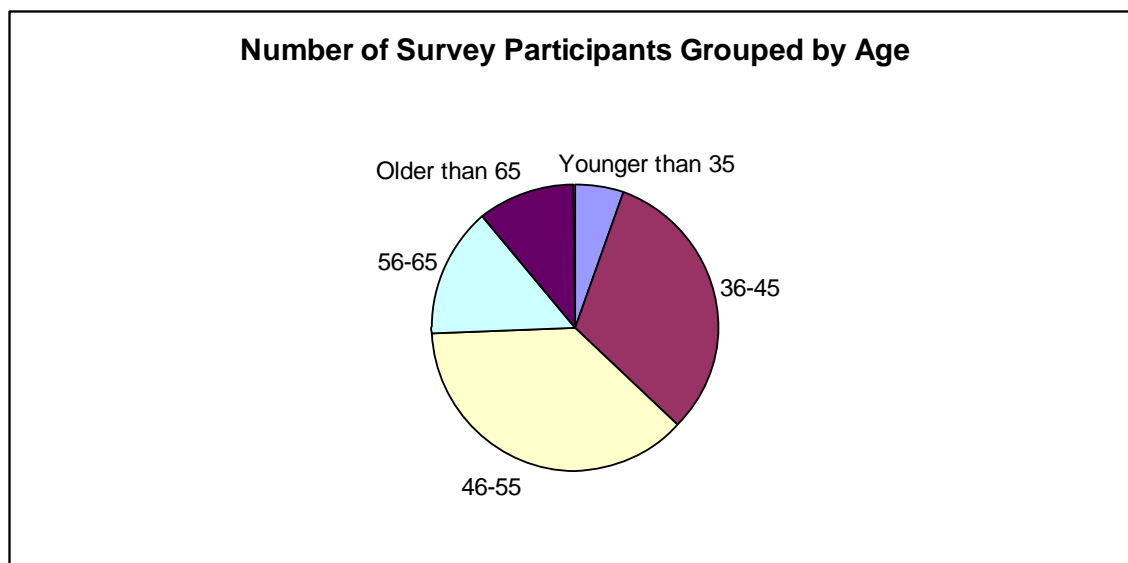
### Demographics

There were 53 participants to our intercept surveys. All the participants interviewed were men. The ethnicity (self-identified) of the participants is shown in figure 2; the age distribution of participants is shown in figure 3.



**Figure 2** Number of survey participants grouped by ethnicity.

Overall there were 25 Māori, 15 Samoan, 4 Cook Island Māori and 2 Nieuan men who agreed to partake in the survey. In addition, there were 3 Tokelaeun, 2 Kirabatians and 2 Fijian men who answered our questions; their ethnicities were categorised under the “Other” category. Individuals of mixed ethnicity were categorized according to the ethnic group they felt most closely affiliated to.

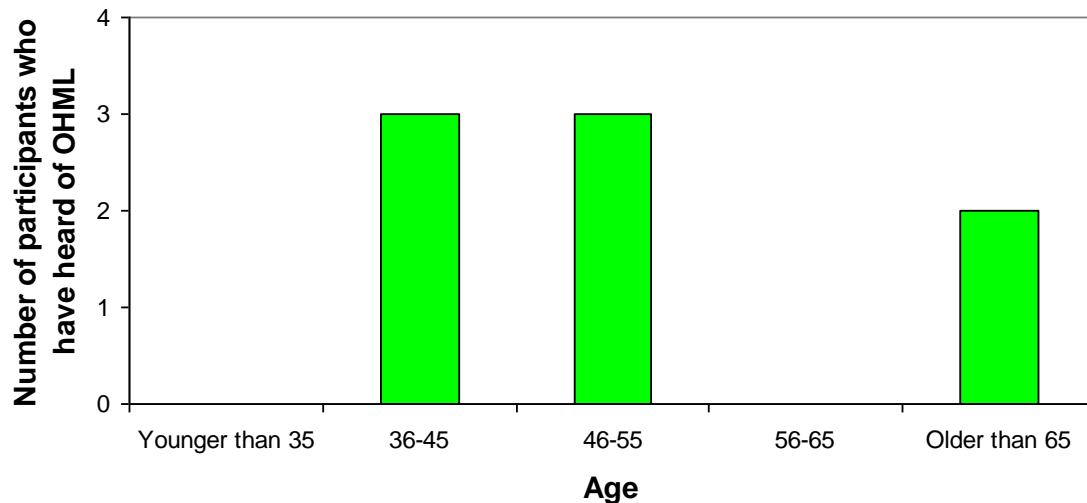


**Figure 3** Age make-up of the survey participants.

Overall there were three men who were 35 or younger, 17 between the ages of 36-45, 20 between the ages of 46-55, eight between the ages of 56-65 and six men older than 66. The following analysis features mainly answers provided by participants over the age of 35.

### **Knowledge about the One Heart Many Lives Programme**

Participants were asked if they had ever heard of OHML or attended any events. To avoid language barriers and to include those who may have been to an OHML event but may not have known what it was called, participants were given easily recognisable background information as to the general nature of such events.



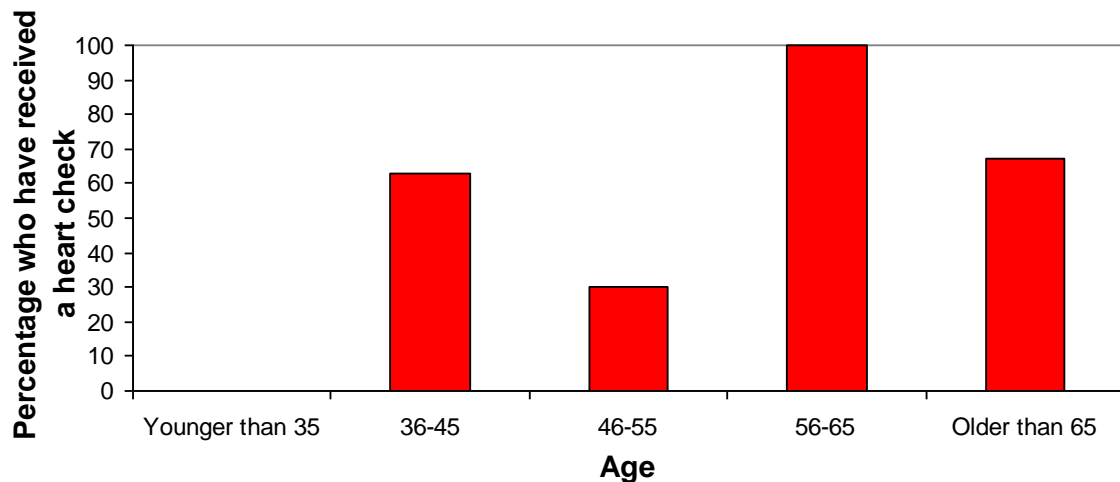
**Figure 4** Number of survey participants that have heard of OHML grouped by age.

Figure 4 highlights the large proportion of individuals who have never heard of OHML. Of 53 participants, eight had heard of OHML and of these, one had received a heart check at an OHML event. This participant then rated the experience a 4 on a scale of 1-5 regarding the usefulness of the experience (1=Waste of Time, 2=Not Useful, 3=Moderately Useful, 4=Useful, 5=Very Useful). Of the eight individuals who had heard of OHML, six had heard it by word of mouth, one had heard of it through health TV and one had heard of it through a Samoan Radio station. No participants had heard of OHML from health professionals or from other forms of public advertising. Of the seven participants who had heard of OHML but had never attended an event, they regarded a lack of knowledge regarding its purpose, time and location of the event as reasons for their absence.

## Heart Checks

All 53 participants were asked if they had ever had a heart check at any point in their lives. Our definition for a heart check was centred on a physical examination conducted by either a doctor or nurse, which featured a blood pressure measurement. Participants were asked if any other tests were done, such as ECG recordings and blood tests. Figure 5 shows the percentage of participants who had received a heart check at one point in their lives.





**Figure 5** Percentage of survey participants that have received a heart check, grouped by age.

Figure 5 highlights the large proportion of individuals who have never had any form of cardiovascular assessment. 14 out of 20 participants within the 46-55 age bracket had never received a heart check; neither had two out of six participants in the older than 65 age bracket. In addition, almost 80% of participants who had never received a heart check had very little or no intention of getting one in the future. The main reasons provided for not going to get a heart check were the expensive GP fees and long waiting times it took to get an appointment.

*“No one around here has that kind of time and money.”*

– Porirua Local, 48

For the 11 out of 17 participants within the 36-45 age bracket who had received a heart check, many of them had it in conjunction with treatment of co-morbidities, particularly injuries that required hospitalisation. Similarly, many of the 55-65 year old men had received a heart check following a cardiovascular incident such as a heart attack or as a part of monitoring of their diabetes. Of the 29 participants who had received a heart check, 25 of them were by GPs, three by clinic nurses and one in a supermarket by an

individual whose profession was not specified. One heart check was conducted at an OHML event.

## Determinants of Heart Disease

The second section of the survey assessed knowledge of the determinants of heart disease. Participants commented on whether a particular lifestyle choice or condition had a “Good Effect”, “Bad Effect” or “No Effect” on the heart. They were then invited to volunteer information to justify their choice. For those who claimed they didn’t know, they were asked to guess. Figure 6 shows the absolute number of answers falling under each outcome category for a given exposure.

<b>Exposure</b>	<b>Perceived Impact - Number of Participants</b>		
	<b>Good Effect</b>	<b>No Effect</b>	<b>Bad Effect</b>
<b>Smoking</b>	0	1	52
<b>Exercise</b>	52	1	0
<b>Being Overweight</b>	3	1	49
<b>Fatty food</b>	3	5	45
<b>Alcohol</b>	7	3	43
<b>Diabetes</b>	0	1	52

**Figure 6** Perceived impact of behaviours and risks on cardiovascular health.

At first glance the table appears to demonstrate a good level of basic knowledge amongst Māori and Pacific Island men about the impact of health behaviours on ‘heart disease’, although there may be cause for concern with respect to attitudes to fatty foods and alcohol. However, our follow-up questions shed some further light on the answers.

**Smoking:** All participants except one thought that smoking had a bad effect on cardiovascular health. Most of these 52 individuals provided no justification as to how or why it was bad, while others only mentioned that this was a well

known fact. The one individual who answered “No effect” agreed to some negative effects of smoking on the heart, but that these were cancelled out due to the stress relief provided.

**Exercise:** All participants except one thought that exercise had a good effect on cardiovascular health. Many of these 52 individuals supported the claim that exercise “keeps the heart pumping” but provided little beyond this. The one individual who answered “No effect” also agreed to the positive effects of exercise, but said these were cancelled out by the strain that exercise puts on the body.

**Being Overweight:** 49 participants thought that being overweight had a bad effect on cardiovascular health. Three thought it had a good effect and one individual thought it had no effect. No justification was provided to support a negative or neutral effect on the heart, but two of the three individuals who answered “Good effect” mentioned that having fat keeps the body warm and reduces overall strain.

**Fatty Food:** 45 participants thought that fatty food had a bad effect on cardiovascular health; three thought it had a good effect and five thought it had no effect. Many of the 45 mentioned that fatty food leads to “fat in the blood” but little was offered beyond this. Two of the three individuals who thought it had a “Good effect” on the heart alluded to the benefits of having body fat and keeping warm to reduce strain on the body. The five individuals who concluded it had “No effect” on cardiovascular health provided no justification even when questioned upon further.

**Alcohol:** 43 participants thought that alcohol had a bad effect on cardiovascular health; seven thought it had a good effect and three thought it had no effect. Some of the 43 justified their answer by alluding to the toxic nature of alcohol and that it is bad in general. Two of the seven that thought it had a good effect mentioned the stress relief alcohol provides another three mentioned that wine is good for the heart and two didn’t provide any

reasoning. Only one of the three participants who answered “No effect” claimed that alcohol “*was just another drink.*”

**Diabetes:** All participants except one thought that diabetes had a bad effect on cardiovascular health. Most of these 52 individuals provided no justification as to how or why it was bad, although a few mentioned that it damages blood vessels. The one individual who answered “No effect” reasoned that diabetes and the heart are unrelated, but knew that diabetes affected the kidneys.

### Assessment of Health Literacy

The third section of the survey assessed the cardiovascular health literacy of participants. Individuals were asked if they had heard of the following terms and what they knew about them: Blood pressure, Heart Attack, Stroke, Cholesterol, Statins and Diabetes. These terms were agreed upon in a student focus group as those that may be used when cardiovascular conditions and assessments are being explained. In addition, questions regarding levels of community understanding of these terms were raised during a meeting with PHARMAC representatives with regards to community knowledge of them. Figure 7 shows the absolute number of participants who had heard of these terms and the number that were able to mention at least one correct fact or statement as according to our own knowledge.

Term	Number who have heard of term	One correct statement/Fact
Blood pressure	31	17
Heart Attack	30	24
Stroke	30	12
Cholesterol	32	15
Statins	11	4
Diabetes	45	40

**Figure 7** Number of participants who had heard of the terms: Blood pressure, Heart Attack, Stroke, Cholesterol, Statins and diabetes. The 2<sup>nd</sup> column shows the number of participants who could make 1 correct statement/fact about that term.

**Blood Pressure:** 31 of 53 participants had heard the term blood pressure and 17 of these could correctly describe something about it. The main consensus reached amongst these 17 was that a high blood pressure was bad.

*“If the systolic measurement is too high you probably need medications.”*

– 44 year old Counselor and Porirua Local

Such statements that included added medical terminology and an understanding of blood pressure control were rare. Most of the other answers deemed correct were related to how it is checked as opposed to what it represents. Some people had heard of the term but gave vague answers that were not considered correct.

*“All I know is that it goes up and down.”*

– 36 year old Plasterer and Porirua Local

*“Related to blood function.”*

– 37 year old Tenancy Manager and Porirua Local

A few of the 14 participants who had heard of the term but gave incorrect answers showed a clear misunderstanding. One participant in particular thought that a high blood pressure was good.

*“High Blood pressure keeps you warm.”*

– 40 year old Butcher and Porirua Local

**Heart Attack:** 30 of 53 participants had heard the term heart attack and 24 of these could correctly describe something about it. The main consensus reached amongst these 24 was that a heart attack is bad for health.

*“It’s when your heart gives out because it’s not getting enough juice.”*

– 51 year old Construction worker and Porirua Local

When asked many of the participants said that they had had a heart attack; however this didn't usually make them more capable of volunteering correct information. Only one participant was able to establish a relationship between high cholesterol and heart attacks.

*"Fat in arteries stops blood flow to the heart"*

– 76 year old Minister and Porirua Local

Four of the six "incorrect" answers provided by participants who had heard of the term "heart attack" seemed to relate it to cardiac pathology other than myocardial infarction (MI). These were usually along the lines "inherited" or "problem with valves." One participant thought that a heart attack occurs as a result of bodily injury.

*"It occurs when you have chest trauma."*

- 53 year old Porirua Local (Unemployed).

**Stroke:** 30 of 53 participants had heard the term stroke. 12 of these could describe something about it: that it was associated with some form of a clot; involved the brain; and often resulted in some form of paralysis.

*"It can be from a blood clot in the brain or sometimes a blood vessel pops."*

– 65 year old mental health support worker and Porirua local

This participant who had had a stroke himself, was the most knowledgeable on the issue. Many participants had claimed to have "heard about them" without being able to provide further information. Others provided vague answers such as *"something to do with the brain"*. A few regarded it primarily as a heart pathology.

*"It's when the heart stops pumping blood to the brain."*

– 65 year old and Porirua Local (Retired)

**Cholesterol:** 32 of 53 participants had heard the term cholesterol. Most of the 32 participants who had heard of it were able to link it back some form of fat; 15 of these could correctly describe something about it.

*“It’s when there is too much bad fat in food. Some fat is good, but most is bad.”*

– 40 Year Old Retail worker and Porirua Local

Most of those 15 made a connection between cholesterol and harm, but only one participant (as previously quoted) established a connection with heart attacks. Other respondents gave answers that were more vague and were along the lines of *“fat”* or and *“related to what we eat.”*

**Statins:** 11 of 53 participants had heard the term statins and four of these could correctly describe something about it. The main consensus amongst these four was that it was given if you have or are too fat.

*“It stops fat in the blood from building up”*

– 57 year old Cleaner and Porirua Local

Seven of the 11 participants who had heard of the term were unable to provide a correct answer. Most were not aware that statins are a form of medication and there were two individuals who thought it was a food. Three of the four participants who were able to provide correct answers reported that they were on statins.

**Diabetes:** 45 of 53 participants had heard the term diabetes and 40 of these could correctly describe something about it. The main consensus established amongst these 40 was that it was related to having a high blood sugar.

*“When you have too much sugar in the blood, it makes you feel crook.”*

Nearly all 40 of these correct answers encompassed some element of high blood sugar as unhealthy. The most detailed answer was provided by a participant who had undertaken a first aid course:

*“There is type 1 which is inherited and type 2 which is related to lack of exercise and too much take out.”*

– 45 year old Security Guard in Training and Porirua Local

Most of these correct answers managed to relate diabetes to either a poor diet, poor levels of activity or a lack of insulin. Some participants went further to comment on how big the problem was in the local community.

*“How can you not have it, it’s so cheap to eat out.”*

– 60 year old Porirua Local (retired)

Five participants who had diabetes commented on downstream complications such as visual impairment, loss of feelings and itchiness in the limbs. The eight individuals who had low levels of knowledge about diabetes were still able to identify some harmful connotations to the disease.

*“It occurs due to high cholesterol levels”*

No answers were discounted because they were too vague. Overall, knowledge of diabetes, its causes and some of its consequences was relatively strong in the community.

## PRIMARY CARE

### Demographics

14 General Practitioners (GPs) from the Porirua area participated in a written survey and one GP was interviewed. Figure 8 below shows the demographic characteristics of the participants. A large proportion of the research participants were either NZ European or South-East Asian, with one Māori participant and no Pacific Island participants. There was an approximately



equal gender split and an even distribution of those who worked for Ora Toa and Porirua Union and Community Health Service (PUCHS). Ora Toa PHO includes practices in Cannons Creek, Takapuwahia, Mungavin and Poneke.

Demographic information	
<b>Gender</b>	
Male	7
Female	8
<b>Ethnicity</b>	
NZ European/Pakeha	7
Māori	1
Southeast Asian	6
Other	1
<b>Role</b>	
GP	14
GP locum	1
<b>Organisation</b>	
Ora Toa	7
Compass Primary Health Care Network	1
PUCHS	6
Unspecified	1

**Figure 8** Demographic information of General Practice participants surveyed and interviewed.

### Knowledge about the One Heart Many Lives Programme

Of the 15 participants, 11 had heard of OHML from various sources. Many had heard of it through direct involvement with the programme e.g. through work with the Ministry of Health, through PHO involvement, or being part of the programme launch in Porirua. Others had heard of OHML through the media, from patients, through their practices or from other GPs.

Participants had varying levels of knowledge about OHML. All 11 participants that had heard of the programme correctly identified that it was about cardiovascular risk. Some mentioned screening and cardiovascular risk reduction, and others recognised that the programme is PHARMAC funded. Other ideas were not components of the OHML programme:

*“...active screening of males >35 years and females >40 years for CVD risk and help reduce risk by treating them”*

Two participants specifically mentioned that the target population is Māori and Pacific Island males.

*“....[the aim is to] encourage at risk males, Māori/Pacific to get CV risk assessment”.*

One participant correctly identified the three main goals of the programme: that it has been rolled out to high needs populations in regions other than Porirua, that it aimed to improve statin prescription to at risk people and that it involved early intervention for cardiovascular risk. One participant who had not heard of OHML correctly assumed that it was to do with preventative health actions for cardiovascular risk.

### **Areas for improving the OHML programme**

Strengths of the OHML programme identified by research participants included:

- Raising community or public awareness
- Improving the knowledge of the community
- Its focus on early/primary intervention and prevention
- Its success in getting family/whānau to engage
- Utilisation of family/whānau to engage patients
- Consistency and repetition of the key messages
- Multi-faceted social marketing

- Its increasing visibility over time due to evolution of the programme

Research participants also identified a number of weaknesses in the OHML programme. These included a lack of funding and resources for: sustained cardiovascular risk assessment (CVRA); health education of the community; and to cope with increasing demands for other primary care services. There was concern that linkages between OHML, the primary sector and other services were poor. However, one participant suggested this has improved somewhat as the programme has been developed over time. For example at the recent annual “Creek Fest” PHARMAC notified local agencies of the OHML screening dates to allow for better coordination of services. Increased publicity and repetition were recognised as a way to improve the programme, with one participant mentioning that they believed OHML has *“slipped off the radar in Porirua”*.

Other perceived weaknesses included:

- Duplication of community health screening efforts
- Patients who present to OHML who have already had CVRA
- Limited evidence that OHML leads to improved patient outcomes
- Issues around patient follow up and management, and;
- That the programme is currently not built into routine primary care in a sustainable manner

Overall of the 11 participants that had heard of OHML, six felt that the programme is effective and two felt it is not. One participant who had not heard of OHML did not think the programme was effective and two other participants did not answer this question. One participant was not sure. Reasons why participants thought the programme was effective included:

- Patients who visit their GP are keen to change their lifestyle as a result of interacting with the OHML programme
- Overall the programme has good outcomes

- If we continue with the programme we will be able to affect intergenerational behaviour towards CVD risk reduction
- It raises awareness as part of a broad strategy of raising CVD risk

*“[OHML is a] good story [that] rings true, good outcomes from it, [and] need to stick with it” as changing perception of cardiovascular risk is an “intergenerational thing”.*

Those participants who did not believe the programme was effective gave various reasons for this including:

- Few patients actually present to GPs following interaction with OHML
- The OHML programme needs to be improved and resourced better
- OHML has lost momentum
- OHML is ineffective because it is not embedded in primary care in a sustainable manner

*“[OHML is ineffective] due to [the] use of pilots and no systemic progress to advance in primary care”.*

### **Current tools used for Cardiovascular Risk Assessment**

All GPs surveyed identified a systematic approach to assess cardiovascular risk in their practice, regardless of whether they knew about OHML. Many mentioned specific tools including EDGE, and MEDTECH. Others mentioned targeting specific groups, with suggestions of anyone above age 35; men over 35 and women over 40; men over 45 and women over 55; and the Ministry of Health/Heart Foundation recommended target groups. The actual strategies used ranged from opportunistic screening to regular heart risk monitoring, and patient invitations for free risk assessment with the practice nurse. A number of specific factors used in risk assessment included patient history, family history, cholesterol, blood pressure, smoking and diabetes. One participant mentioned that they target ethnic groups at high risk e.g. Māori and Pacific

Islanders. Several GPs mentioned recording risk assessment results in the patient notes to allow monitoring and management.

### Strategies used with Māori and Pacific Island Males

Strategies identified to increase compliance amongst Māori and Pacific Island men included advice, discussion, and education or explanations. Practical steps such as regular appointments, blister pack medications, reminder letters or notices, and printed advice were also mentioned. Several practitioners indicated that they have found compliance to be a big issue among this target group especially in those who are asymptomatic.

*“Our patients don’t feel ill despite increased CVD risk; in fact we introduce an illness experience by telling them they have a disease and prescribe statins which have side effects.”*

*“People lose focus, human tendency to pay less attention to prophylactic non-acute type medications”.*

Two research participants said they discussed the impact of poor health for the patient on other family members including wives and grandchildren. Others mentioned that it is important to tailor treatment to the individual for effective outcomes and that different patients will need different explanations to remain compliant with medication.

*“[I] tend to try and rationalise medications and concentrate more on blood pressure control and smoking cessation as this makes the biggest difference to risk”.*

Two participants mentioned that in their experience some ethnicities are on average more compliant than others.

*“On average Pakeha are slightly more compliant than Māori and Pacific [but this is] slowly changing.”*

*“Second generation of New Zealand born Pacific men coming into the risk category – [are] less resistant than first generation [to lifestyle changes].”*

Follow-up strategies used to address cardiovascular risk in Māori and Pacific Island men included standard primary care processes: recall computer systems; using nurses to organise follow-up; and the use of opportunistic screening. It was recognised that follow up can be difficult for some patients due to work commitments and not having enough time to attend follow up appointments.

*“[It is] difficult getting target men in the room as they won’t take time off work.”*

Research participants mentioned various approaches to lifestyle education when working with Māori and Pacific Island men. All participants gave lifestyle or health behaviour advice to the patient in some form with a focus on improving diet, smoking cessation and increasing exercise. Some participants made use of written information or pamphlets, while four participants referred patients to other health professionals including dietitians, personal trainers or face to face nurse consultations. Quitline and other smoking cessation services, Ora Toa Health Unit and Gym, exercise programmes (including marae and community based programmes), Green Prescription and Pacific services are also utilised. One participant identified that PUCHS had an affiliation with a local swimming pool to get people involved which has been helpful in terms of initiating exercise and fitness programmes. Two participants did not refer to community organisations.

### **Impact of OHML on Practice**

Of the 11 participants that had heard of OHML, six said that there had been no change in their practice, two said there had been an increase in their assessment of cardiovascular risk and one had made use of the promotional

material that had been sent out. The other four mentioned the use of standard cardiovascular risk assessment tools and how this had made OHML less important.

*“OHML has become a largely irrelevant programme for me”.*

## Nurses

At the end of the project no responses from nurses had been received. Given the short time frame for our project, there was little opportunity to attempt to re-engage with nurses once the failure of our initial attempts had become clear.

## DHBs/PHOs Group

We held semi-structured interviews with eight DHB or PHO staff. Five of these were interviews with solo participants; one a focus group of three. The nine key themes extracted from our analysis are presented here.

### 1. Access to health care for high needs groups and the most deprived

Participants understood the aims of OHML and recognised the importance of the initiative.

*“The health of Māori men is often overlooked.”*

*“Māori and Pacific men have low awareness of their cardiovascular risk.”*

Individual OHML events and campaigns have been successful at overcoming barriers to access for Māori and Pacific Island men.

*“The campaign was aimed at men at risk of CVD; a population group that is unlikely to access health care. It aims to bring attention to the*

*importance of their health in terms of its impact of them and their families.”*

*“One Heart Many Lives was very successful in targeting this high needs group that often doesn’t access health care...”*

*“It was obviously very successful as there was a large influx of Māori and Pacific men over 35 who came in for a heart check.”*

*“Statins were part of the initiative with patients with cardiovascular risk greater than 15%. The medical staff were targeted with this message as part of the roll-out. Certainly we feel that there is an increased uptake in prescribing statins.”*

## **2. Re-orienting primary care to provide cardiovascular risk for high needs groups**

Participants felt that OHML campaigns can increase awareness of cardiovascular risk assessment (CVRA) and can prompt clinicians and PHOs into best practice. Multiple initiatives had been undertaken by individual clinics in Porirua including: opportunistic screening by doctors; practice nurse screening; IT system development to flag patients for follow-up; and nurse out-reach programmes to make contact with patients who do not access care yet have high need. All of these initiatives had been implemented in practices associated with the PHOs we interviewed. The integration of these systems and processes into clinic work-flow can lessen the burden on individual clinicians.

*“[OHML] left an enduring impact on clinicians and their practice. It made CVRA an enduring part of clinic procedures.”*

## **3. Barriers to successful health promotion initiatives**

There is universal agreement that the biggest barrier to health promotion is the insufficient funding. However other resources, especially trained staff;



time; effective planning; and a supportive funding model are in short supply. As funding cuts are implemented health promotion appears to be first in line for cut-backs.

*“...they are trying to take a positive approach to health promotion but this is difficult in this fiscal environment.”*

PHOs do not have enough resources to run large community events.

*“Small community providers lack funds to undertake this work alone.”*

#### **4. The funding model**

Budgeting for health promotion on a project basis rather than on an on-going basis leads to the loss of momentum in new health initiatives. Moreover priorities change too frequently, potentially with each new annual Ministry of Health budgeting cycle. Monies made available on a grant basis do not support the development of staff and know-how in the community. Too often, health promotion projects which are launched are not sustained or integrated into practice.

*“The reason these things fail is because they are projects”*

*“The three components of a successful programme are resources, funding and people. Each has to be organised with a view to more long-term implementation. Five or six goals should be identified and pursued over a multi-year horizon.”*

*“Many programmes come and go without any lasting effect”*

*“An important aspect of health promotion and projects such as this [OHML] is that funding needs to be continuous allowing a consistent message.”*

PHOs rely on different funding streams including First Contact Care; their management fee; the Services to Improve Access (SIA) Fund; and occasional health promotion grant money from the Ministry. Small community providers and PHOs lack the funds to undertake high profile social marketing initiatives.

*“Planning and research is needed to make sure the programme will be effective and sustainable.”*

*“In primary care the lack of flexible funding is a problem.”*

*“Resentment could develop [between community providers] with the resources and money associated with OHML and its swanky tent, t-shirt, and giveaways, but it did engage successfully.”*

OHML provided a separate and welcome source of funding and resources, however this too was not on an on-going basis.

*“The message is not continuous. It keeps popping up sporadically at events such as Creek Fest, but the message slips from people’s minds over time.”*

A concern was expressed that the lack of on-going funding meant following through on the expectations raised in the community was difficult.

*“Effort and funding petered out after eight to ten weeks. Too short term to support people who had attempted to change.”*

*“It created an expectation within the target population that could not be followed up.”*

## **5. Prioritisation of health promotion initiatives**

Participants consistently drew attention to the fact that priorities have been set by many layers of the health system, from the Ministry of Health, to DHBs, to PHOs, to individual clinics. As a result the priorities may lack consistency,

and are perceived to change too often. Participants universally acknowledged that constrained resources imply that prioritisation is necessary. All participants indicated that targeting high needs group was necessary.

*“In prioritising projects it is important to focus on what is relevant and important to that community”*

## **6. Social marketing**

The components of OHML community events and initiatives are seen as successful. These included community engagement from the start; a high-profile and well-resourced presence at community events; t-shirts for school sports teams; a consistent brand; “Brofiles” and “Local Heart Heroes”. Together these interventions are perceived to have got the key message across to the target group.

*“Using local people as the face of OHML makes it less intimidating and less clinical.”*

*“Branding is professional and strong”*

*“[OHML] allows use of national branding, giving a local campaign credibility and strength.”*

## **7. Community based initiatives.**

Research participants stated that community engagement has been embraced from the beginning of the roll-out of OHML initiatives. This allows local people and community leaders to help shape the initiative so that it uses their resources, belongs to them, and gets through to target groups. It turns the health system into a community resource instead of appearing as distant or other. In Porirua, engagement with the marae is credited with creating a surge of interest in CVRA. In the Hutt Valley, engagement with a church with a Pacific Island congregation was seen as the right route to increasing CVRA uptake.

*“The community based approach generated a huge response from a group that don’t generally access health care and were not expected to respond.”*

*“[Community engagement] makes it easier to attract people.”*

Innovative resources for patients have been developed in the community. The ‘traffic light’ cards developed in Porirua are generally perceived to be a lasting benefit of the initiative.

Participants highlighted the importance of engagement with women and children in the whānau group in order to prompt the take-up of services by men.

*“Targeting at risk men through their partners and whānau was very successful.”*

Participants gave OHML credit for their approach to community engagement; this was seen as a key element of a successful health promotion initiative, and represented best practice.

*“To be successful a programme must be deeply rooted in the community, run by familiar faces and organized locally for local people.”*

*“...it grows champions in the community.”*

## **8. Flexibility to adapt a national campaign to local circumstances.**

Participants were enthused by OHML’s respect for local communities and their needs, yet also grateful for the resources and expertise that OHML brought to the campaign, and for the national brand. However, there is room to increase the exchange of knowledge across regions. Regions which are

exploring OHML with a view to rolling it out are keen to learn from places where there is already experience. Some participants who play an active role with OHML in their community are unaware of other OHML programmes in their region.

There was positive feedback from multiple participants about support and communication from the OHML team. In areas where OHML has been underway it is perceived as providing a positive boost to local health promotion staff experience levels.

## **9. Conflict and co-operation between different parts of the health workforce.**

Communication with and across providers is crucial for the success of health promotion initiatives.

*“It is important to work closely with providers to find out what is working and what isn’t. What isn’t working should be stopped and the strengths of each provider should receive funding.”*

*“Getting those at the clinical level to take an active approach to health promotion involves reading about new ideas and communicating with colleagues. Some practices are very good at this; others simply see their role as a job rather than as a service to the community.”*

There are non-clinicians and nurses that are of the view that some doctors are too focused on individual patients and the next consultation to make time for health promotion.

*“Health promotion can be effective without the input of doctors.”*

Some clinicians find that non-clinicians underestimate the effort required to make the health promotion work.

## Discussion

As the leading cause of death in New Zealand and as a leading cause of early death and disability in Māori and Pacific Island men, two groups with a high burden of ill-health, cardiovascular disease is a high priority target for health promotion for New Zealand. Through interventions focused on lifestyle behaviour, knowledge and access issues OHML addresses key modifiable risk factors for CVD (1, 14, 40). Built on a foundation of community action; the development of personal skills (for example the BroFiles programme); the construction of supportive environments (through whānau and community involvement); and a preventative approach to health OHML embraces the principles of the Ottawa Charter for Health Promotion. The one dimension of the Charter that OHML does not appear to address is healthy public policy, with which we found few links.

PHARMAC has implemented a programme that features aspects of health promotion in New Zealand as described by the Ministry of Health. Involvement of local iwi, hapu, whānau and Māori communities is not only a feature of the programme, but one of its foundations (28). Links with Pacific communities are similarly important to OHML. Furthermore, the Treaty principles of partnership, participation and protection are honoured throughout the programme (28).

The Te Pae Mahutonga model provides a framework for the assessment of OHML's engagement with Māori men and their whānau (29). In its strong integration in Te Ao Māori OHML embraces mauriora. A message of Toiroa, a healthy lifestyle, is a central element of OHML. Wairoa and Te Oranga are less clearly addressed but the implementation of Nga Manakura and Te Mana Whakahaere are strengths of the programme (29).

Current research suggests that relatively small effects can be obtained from community or primary care based cardiovascular risk prevention programmes (31). This conclusion is likely due to poor recording and reporting of

outcomes, and the complex nature of successful health promotion. Well-implemented interventions that target high-risk groups such as OHML have been shown to be worthwhile with a significant reduction in cardiovascular risk (31).

Central to the high-risk individual approach to cardiovascular disease prevention is CVRA. It has the potential to bridge the “treatment gap” between the number of people who could benefit from lifestyle changes or drug treatment and the number of people receiving this care (25, 41).

However, it is important to consider the wider context of cardiovascular disease when assessing health promotion (41). Although high-risk individual strategies of health promotion are useful, the literature suggests that the most beneficial changes are population-wide. This view is supported by several of our research participants. Changing the societal factors at the root of cardiovascular disease disparities is outside the explicit scope of OHML. Nonetheless, as an area raised by our research participants and our literature review it is the focus of some of our recommendations (next section).

## Community Group

Our findings suggest a poor level of awareness of the OHML brand in the Porirua community. We also identified few men in the target population that claimed to have ever received a CVRA. Improving community awareness of OHML by increased advertising and repetition of key messages could help address this issue and improve the proportion of Māori and Pacific Island men screened for cardiovascular disease. We also found that of those individuals that claimed to have had a CVRA, the majority occurred following hospitalisation for co-morbid conditions or injuries. As OHML aims to prevent cardiovascular disease, greater focus on screening younger men (age range) will help to ensure lifestyle changes and therapy can be started before such events occur.

Survey participants recognised that recent OHML initiatives in Porirua have been focused primarily in the Māori community. Initial strong connections with Pacific Island churches and community groups do not appear to have been well maintained. Establishing new links and strengthening existing ties would help to reach this target group as engagement with communities is important for maintaining momentum in health promotion efforts (29).

Health literacy was one of the aspects we looked into as part of our community focused research. Although heart disease and its determinants were named as problems in the community by the community leaders we spoke to and they had a good understanding of why this was a problem, the level of health literacy and awareness amongst members of the Porirua community was somewhat lower. Literature shows this is a key area to address in health promotion programmes and although OHML is achieving this at some level, we feel this is an area where future efforts could be directed to increase community awareness of cardiovascular risk and disease.

In terms of awareness of the OHML programme we found that both members of the Porirua community and key Community Leaders had a low level of awareness or had not heard of the OHML programme. Those leaders who had heard of it thought that people did not know about it. This was however different in the GP and PHO/DHB research group where most participants had heard of the OHML programme and both awareness and knowledge about it were good.

Two other aspects canvassed in the community research group were those health barriers and how these could be addressed. Many research participants mentioned the cost of doctor visits as a barrier. However, time to attend appointments and long waiting times to get appointments were also mentioned. This is in line with what is known in the literature about key barriers to preventative and primary health care (40). In terms of improving barriers research participants mentioned reducing the cost of doctor visits or making them free would help as well as using alternative models for reaching high risk populations such as taking health care and screening services to



sports fields, workplaces and supporting marae based services such as Ora Toa which are well regarded and attended by Māori and Pacific men in the community. The marae and sports teams were suggested as good places to access men for programmes. Nurses and other healthcare workers were not mentioned as possible care providers.

## Primary Care

Although 11 of the 15 GP participants were aware of OHML, only two of them identified the target population of the programme correctly. GPs identified a broad range of benefits from the programme for the community; for whanau; and for individual patients, around awareness, knowledge and action on cardiovascular risk. However, our GP participants identified the funding model; a loss of momentum after events; a lack of provision for surges in demand for primary care following events; and what they perceived as a duplication of effort as limitations. In their view the solution to these issues is to embed programmes like OHML in primary care on a sustainable footing.

Some GPs would like to see improved communication between OHML and primary care. One participant stated that this had already been addressed in more recent projects. This may be something that can be further improved. GPs also noted that OHML's profile in the Porirua community has "*dropped of the radar*". Addressing continuity of messages after the events may help to cement the benefits of OHML interventions.

The strategies identified by GPs for increasing compliance by Māori and Pacific Island patients included standard tools of communication in doctor-patient consultation (advice, discussion, education and explanation) and standard office and dispensing processes (reminder letters, blister packs). It is striking that there was no mention of engagement with partner and whānau as part of the consultation. This may be due to an unwillingness to change entrenched habits or may be due to other barriers which our research did not identify or address (e.g. patient confidentiality).

One GP noted that work commitments prevented Māori and Pacific Island men from attending regular follow up consultations. Culturally determined attitudes to work and an inability to take time off for non-acute illness, especially if the patient does not identify as unwell, were not explored in our study. These issues could be worth further exploration.

Our GP survey revealed that practitioners in Porirua use a diverse array of cardiovascular risk assessment tools. This variation may complicate efforts to adopt standard guidelines and to disseminate clear and consistent messages about cardiovascular health in the community.

### **DHB and PHO feedback**

Interviews with key participants in DHBs and PHOs in the Wellington, Hutt Valley and Wairarapa region allowed us to evaluate several aspects of OHML. Overall we found that OHML has a high profile in these circles: its goals are clear, well understood, and thought to be legitimate and important; it is perceived as having had resounding success with its events and campaigns to improve access to CVRA for a high need group who do not tend to access health care.

Research participants perceived OHML as providing an injection of expertise, resources, and funding to get a new initiative underway, all of which are in short supply in the sector. By taking expertise from a national body right down to the 'shop floor', and working with PHOs, primary care providers and local people, our research found that OHML overcomes some of the barriers to implementing programmes across multiple institutional layers in the New Zealand health system.

OHML has been effective in pursuing a health target with national relevance, branding and centralised expertise while accommodating local input into the implementation of promotion efforts. These are all key aspects of successful health promotion and indeed of successful cardiovascular risk reduction (28). OHML has shown that a focus on local priorities and community engagement

does not preclude a significant contribution from national campaigns and the more substantial resources that accompany them. Indeed, OHML is an example of a national campaign which can mesh with and be adapted to local conditions and this is one of its key strengths according to research participants we spoke to.

However, research participants also raised some concerns about the fact that although successful, the OHML programme is often just a one off event. This means funding is only provided in a one off manner for an event rather than long-term for clinical services and any increase in demand. Although participants are aware that funding for such services is outside of the remit of PHARMAC, for them this raises the issue of who in the health system should fund any increases in patient or community demand for health services as a result of screening or health promotion activities. This funding issue was perceived to be detrimental to the achievement of lasting improvements in health status, which can lose momentum once funding disappears. In addition our research also found that the lack of recurrent, ongoing funding enables a system in which priorities change too frequently.

Our research found that OHML has developed a diverse array of tools to successfully engage the target population and bring them into contact with health services. Research participants thought that these social marketing techniques are well adapted to the target population and they are widely praised as being effective. In particular, the focus on interaction with men's partners and whānau is seen as a strength of the approach. This is well supported by literature which recommends such an approach for successful health promotion programmes (29).

The strong emphasis on community engagement in OHML is seen as a major strength of the programme. Participants acknowledge that it is a good example of best practice and underpins the change in the uptake of CVRA and health services by the target population. In addition, OHML has had a lasting impact on the primary care practitioners that we interviewed. By increasing awareness of CVRA, OHML has prompted clinics to embed best

practices into their everyday operations – from IT, to nurse screening, to opportunistic screening.

This reconfiguration of primary care can have lasting benefits. Similarly, by providing a model for community engagement and health promotion initiatives, research participants believed that OHML has led the way for future interventions and increased experience in the local health workforce. OHML can build on these contributions by sustaining its national brand and developing its portfolio of innovative interventions from different regions.

## Strengths of this evaluation

This evaluation was designed as a pilot evaluation of the OHML programme. A number of key strengths in our approach and recommendations for future research are outlined below.

- **Mixed methodology.** This evaluation uses both qualitative and quantitative research. Semi-structured interviews, focus groups and written surveys as well as a review of New Zealand and international literature have provided a good breadth and depth of information from which to generate recommendations to PHARMAC on the OHML programme.
- **A good rate of GP responses.** Despite our time constraints and the commitments of GPs, we view the extent of their participation in our project as a key strength. The information and feedback obtained from the 15 completed GP surveys is a strong pillar to support the framework of this multifaceted evaluation.
- **Diverse groups of research participants.** This evaluation includes responses from a wide range of participants, including members of the public, Community Leaders (Kaumatua Council and Pacific forum), GPs and members of DHBs and PHOs.

## Research Limitations

### Overall limitations

This evaluation was a student project with a very short five-week timeframe primarily designed to be an initial exploratory pilot evaluation, rather than a comprehensive review.

### Cultural Limitations

Due to the five week timeframe it was difficult to effectively engage in a culturally appropriate and sensitive research process. Key stakeholders in our research included Māori and Pacific Island men. Time to engage more closely

with these groups would have allowed greater tailoring of our questions and methodology to their needs.

## **Timeframes**

The short timeframe of the project affected several aspects of our research including: the engagement process with our research participants before starting data collection; the quality of data collection; the number of research participants we could interview/survey; and the depth of our data analysis and literature review.

## **Location**

We limited our research to contacts within the Wellington/Wairarapa region and did not cover any of the other areas where the OHML programme has been delivered. As such our results may not be generalisable to all areas.

## **Data Quality**

Several aspects in our research methodology are likely to affect the quality of our data. Due to time constraints, none of our survey and interview questions could be piloted and adapted prior to use, interviews were not recorded or transcribed, and there may have been a lack of consistency in data collection and analysis due to different members of the research team conducting interviews and surveys. All these aspects may have affected our analysis.

## **Selection Bias**

GPs, PHOs and other key contacts were not systematically sampled but rather convenience sampled. This may have introduced some selection bias into our research. For example, those who agreed to be interviewed may be more likely to have strong opinions about OHML and those who were indifferent may be less likely to agree to an interview. The timing (1-4 pm weekdays) and location of our surveys (Porirua Mall near lots of fast food outlets and the local Community Link Centre) potentially led to selection bias

as we had many retired, unemployed or elderly participants in our sample but not many in the 35-55 age group or those who would have been in employment at this time.

### **Recall bias**

In some areas, especially Porirua, we relied on interviewing and surveying research participants who were involved with the OHML initiative 4-5 years ago. It is possible that their recall of the programme has been influenced by a range of events since including: their own opinions; media coverage; other researchers who have spoken to them etc.

### **Interviews and Surveys with Doctors/Nurses**

Our sample only included one Māori participant and no Pacific Island participants. As these are the target groups of OHML we do not think that we adequately covered their views and feedback on the programme.

There were no nurse participants, so this perspective is missing. As key stakeholders in the OHML programme, nurses need to be included in future research.

### **Interviews with members of the public - Intercept Surveys**

Language difficulties were observed when surveying members of the public (some did not understand English or only knew of the OHML programme by its Māori name).

## Recommendations

The following recommendations have been developed from analysis of our findings, discussions with key community stakeholders, a literature review on key issues relevant to OHML and information from prior evaluations and research projects conducted on the OHML programme.

This section includes two sets of recommendations. The first section will focus on key recommendations related to the OHML programme. The second section contains key recommendations for any future research taking into account the issues and barriers we encountered in our research.

### 1. Recommendations for the OHML programme

Most of the recommendations below are contingent on sustainable, on-going funding for OHML. In the current policy setting this may seem unlikely. Nonetheless these recommendations reflect the positive impact of OHML that our evaluation has identified, and aim to guide consolidation and expansion of those benefits.

- **Continue the strong focus on community engagement.**

This is perceived as a strength of OHML, and is well supported by the literature as best practice.

- **Continue to involve and inform community leaders.**

We found that some local leaders were not aware of and connected with OHML; if funding allows, then an expansion in the breadth and depth of knowledge about OHML will only magnify the positive impact of the programme. This community connection is an important component of Te Pae Mahutonga and the Ottawa Charter for Health Promotion.



- **Continue to build awareness of the programme in the community.**  
Development of the recently launched website may be a low cost way of doing this (too recent to be assessed here).
- **Integrating OHML with every level of the healthcare system.**  
For instance by building links to healthy public policy which targets CVD. This could maintain momentum for the programme; broaden support for it; and may generate a push for new funds not only for new events, but to address an apparent shortfall in the capacity of the primary care sector to accommodate the surge in interest in CVRA which OHML events can generate.
- **Strengthen the long term sustainability of OHML in individual communities**  
Many of our research participants voiced concerns about getting involved with a programme then having it go “off the radar”. OHML events succeed in generating increased uptake of CVRA however this can easily overwhelm the capacity of primary care providers if not done in a long term sustainable manner.
- **Build ongoing evaluation of OHML into the programme**  
This will ensure that intended outcomes are achieved and any unintended outcomes are addressed.
- **Utilise existing data to determine whether OHML has achieved its intended outcomes.**  
Analysis of existing data could help determine whether OHML has had a long term effect on cardiovascular risk reduction in target populations.
- **Continue to build on the success of whānau engagement.**  
This will ensure the ongoing impact of the OHML programme and recognise the impact that heart disease can have on people’s roles and responsibilities.

## 2. Wider Health Sector Recommendations

- **Document and share the successful innovations across regions.**

OHML has developed numerous innovative approaches to community health promotion and cardiovascular risk prevention that we believe could enhance the work of other regions.

- **Encourage streamlining of CVRA in primary care.**

It appears that GPs use a diverse set of tools, which undermines the adoption of a standardised approach and diminishes the benefits across the sector.

- **Encourage streamlining of statin prescription.**

Although captured in Cardiovascular Risk Guidelines, it became evident that GPs use a variety of approaches, which may entrench inequalities (3).

- **Expand the targets for OHML to include those of healthy public policy and build a constituency in support of those targets.**

This could act to change the societal, economic and behavioral factors that cause heart disease.

- **Maintain momentum and create continuity through communication with primary care.** Some GPs do not have a good working knowledge of the programme, so education of health care workers will continue to be important.

- **Build partnerships with other cardiovascular risk programs.**

This could reduce redundancy and improve coherence for health care practitioners and patients.

### 3. Recommendations for future research and evaluation

In our evaluation these are some of the key lessons we learnt and think could improve future research. They include:

- Allow sufficient time for effective stakeholder engagement
- Ensure culturally appropriate research methodology is used to engage Māori and Pacific Island participants
- Pilot research surveys and questionnaires so that they are more effective for use with the intended audience and can be refined before actual use
- Allow more time for contacting stakeholders and finding appropriate participants for interviewing to minimise selection bias
- Try to include Māori and Pacific Island men who have actually been through the programme for their views on OHML
- Ideally evaluate all regions of OHML because of the variation of the different regions.
- Make use of statin data to evaluate the impact of past programmes. We did not have enough time to fully incorporate this data into our evaluation but feel that it would be very positive in showing the impact the OHML programme has achieved.

## Conclusion

Each of the component parts of our study generated conclusions. We have grouped them into two sections – the first is focused on the evaluation of the One Heart Many Lives programme, the second brings together more general insights into the New Zealand health system that arose as part of our research.

### 1. Evaluation of One Heart Many Lives

*One Heart Many Lives rests on sound theoretical foundations.* Our literature review indicates that the model of health on which it rests reflects best practice according to the WHO Ottawa Charter and the Te Pae Mahutonga model of health. Its design as a health promotion initiative is consistent with the TUHANZ guidelines for health promotion in New Zealand.

*One Heart Many Lives has a high profile with PHO and DHB staff involved in health promotion and population health.* Research participants consistently gave voice to its well specified goal and its focus on high needs groups.

*There is a consensus amongst PHO and DHB staff that it addresses a high priority issue.* Māori and Pacific men have a high burden of morbidity and mortality from cardiovascular disease, and are less likely to receive treatment from the health system. Research participants recognised that One Heart Many Lives is focused on a key problem.

*It has a lower profile with members of the public.* Our community survey found that eight of the 53 people surveyed in Porirua had heard of One Heart Many Lives. This is consistent with responses from some primary care staff, who indicated that after a high profile initial launch, the effort, funding, and profile of One Heart Many Lives has tailed off in Porirua East.

*It features a relentless focus on community engagement.* The evidence we gathered pointed to the focus on community engagement as a key element of events and initiatives of the programme.

*One Heart Many Lives succeeded in generating a surge of demand for cardiovascular risk assessment (CVRA) following its presence at Creek Fest and the efforts which accompanied that initiative. Research participants linked that success with the programme's focus on community engagement.*

*The diverse array of social marketing tools used by One Heart Many Lives is recognised as highly effective, and is admired. Research participants identified the strategy of reaching Māori and Pacific men through their partners, whanau, marae and church congregations as successful tactics for health promotion with a group that they had thought would not respond to health promotion initiatives.*

*One Heart Many Lives can prompt a reconfiguration of primary care services to enhance cardiovascular risk screening. A PHO contact explained that the implementation of One Heart Many Lives prompted one clinic in Porirua East to introduce a set of measures into their clinical practice, including: nurse heart checks; IT systems that flagged patients for follow-up; and opportunistic CVRA by GPs. This rationalisation of service delivery is perceived as being effective for patients and for health care staff, who can be freed up to pursue other work.*

*There are strong concerns about the funding model for One Heart Many Lives and for health promotion in New Zealand more generally. Our research indicates that GPs, PHO, and DHB staff welcomed the injection of funds, expertise, and planning provided by PHARMAC through One Heart Many Lives. However they also had strong concerns about a failure to provide for the surge in demand for primary health care services which followed the community events. One participant put forward the view that by failing to provide for the services which it encouraged Māori and Pacific men to take-up, the programme let them down.*

*GP respondents noted that One Heart Many Lives was not embedded in primary care, and identified this as the reason for a diminution in its impact over time.*

*One Heart Many Lives combines national health priorities and concentrations of expertise with local input and control.* PHO and DHB staff consistently praised this approach, which ensured high standards and empowered local people.

*There is room for more evaluation of One Heart Many Lives.* Research contacts from regions that are in the research and planning phase of One Heart Many Lives initiatives are keen to learn from regions which have experience of the programme. Our own experience with this pilot evaluation suggests that a longer timeframe and the opportunity to assess the full set of One Heart Many Lives interventions, and their regional variants, would be valuable. A fuller evaluation would document the successes of One Heart Many Lives and offer an opportunity to refine its operations.

## **2. Insights into the New Zealand health system**

*Programmes like One Heart Many Lives can boost performance in the PHO sector.* They can provide a template for successful health promotion techniques; they inject expertise which can raise the skill levels of local staff; and they can prompt the development of relationships with key community leaders and groups in communities with a high burden of ill health.

*GP charges can prevent people from accessing the health system.* Evidence from community leaders and our community survey indicates that GP fees and waiting times are perceived to be an issue that prevents people from accessing primary care. Given that the population of Porirua has a high burden of ill health, and may benefit from health promotion efforts, risk reduction strategies, and consultations with primary care staff, this is a poor outcome. However, our research also indicates that at PUCHS, one primary care provider in Porirua East, many patients do not pay.

*The primary care sector is operating at full capacity.* The surge of demand for CVRA in Porirua following the One Heart Many Lives initiative at Creek Fest could not be accommodated. This suggests that the New Zealand health system cannot provide for the burden of ill health in the country.

*GP, PHO and DHB contacts all agree that the funding model for health promotion in New Zealand sets it up to fail.* Funding for health promotion is too often on a project or grant basis. As a result, new initiatives are not embedded in clinical practice and community programmes on a long term basis, and the benefits of long term engagement, from which the gains of changes in health behaviours and prevention efforts are likely to flow, are not captured.

*The priorities of health promotion efforts change too frequently.* GP and PHO contacts expressed disappointment with the frequency with which the Ministry of Health and DHBs changed the priorities for health promotion. These frequent changes were linked by our research participants to the funding model.

*Re-apportioning capitation funding to pay for population health initiatives, including health promotion, is an uphill task.* At current levels of funding, it requires a retrenchment in other primary care services in a sector that is already operating at full capacity. This requires difficult and potentially painful decisions, which the sector is not well set-up to take on.

*Where funding cannot increase, productivity improvements are the only solution.* Alterations to the funding model, combined with innovation and rationalisation in health promotion delivery, may improve the situation and increase productivity in the sector. One Heart Many Lives offers an example of a programme which combines best practice, national priorities, and concentrations of expertise with local needs and resources. In so doing, it offers a potentially powerful template for action. If combined with components of healthy public policy and other proven population health initiatives over a multi-year horizon with consistent funding, it has the potential to deliver on the promise of prevention.

## References

1. Ministry of Health. New Zealand mortality statistics: 1950 to 2010. Wellington: MoH; 2011.
2. Whittaker R, Bramley D, Wells S, Stewart A, Selak V, Furness S, et al. Will a web-based cardiovascular disease (CVD) risk assessment programme increase the assessment of CVD risk factors for Maori? Journal of the New Zealand Medical Association. 2006;119(1238).
3. New Zealand Guidelines Group. The Assessment and Management of Cardiovascular Risk. Best Practice Evidence-Based Guideline: NZGG; 2003.
4. Selak V, Rafter N, Parag V, Andrew Tomlin, Hoorn SV, Dovey S, et al. Cardiovascular treatment gaps: closing, but slowly. The New Zealand Medical Journal. 2009;122(1293).
5. Sinclair D. One Heart Many Lives; PHARMAC's Cardiovascular Disease Risk Reduction Campaign. Programme Evaluation Summary. Wellington. New Zealand: PHARMAC2006.
6. Wilson M. Critical appraisal of One Heart Many Lives Social Marketing Programme. : PHARMAC2008.
7. Parore-Katene M, Jacobs K. Memorandum for board meeting 25th March 2009 "Consideration of One Heart Many Lives National Programme Plan". . 2009.
8. PHARMAC. About PHARMAC. Wellington, New Zealand2011 [updated 26.05.201130.05.2011]; Available from: <http://www.pharmac.govt.nz/>.
9. Pharmac and pharmaceutical issues Ministry of Health; 2011 [cited 2011 29 June]; Available from: [http://www.moh.govt.nz/moh.nsf/0/2e26af5ebbb10afbcc256c240079b14b/\\$FILE/pharmac.pdf](http://www.moh.govt.nz/moh.nsf/0/2e26af5ebbb10afbcc256c240079b14b/$FILE/pharmac.pdf).
10. Parore-Katene M, Metcalfe S. Commentary on "The impact of cardiovascular risk awareness campaign on statin prescribing - good news/ bad news": PHARMAC2005.
11. Gribben B, Jackson R, Arroll B, Metcalfe S, Goodyear-Smith F. The impact of cardiovascular risk awareness campaign on statin prescribing good news/bad new: CBG Health Research Ltd2004.
12. Ratcliffe L. "Brofiles" a winner in highlighting CVD. NZ Doctor. 2009;11.
13. Tobias M, Sexton K, Mann S, Sharpe N. How low can it go? Projecting ischaemic heart disease mortality in New Zealand to 2015. The New Zealand Medical Journal. 2006;119(1232).
14. Beaglehole R, Bonita R. Heart health in New Zealand. Journal of the New Zealand Medical Association. 2009;122(1288).
15. World Health Organisation. Prevention of cardiovascular disease : guidelines for assessment and management of total cardiovascular risk. Geneva, Switzerland: WHO Press; 2007.



16. World Health Organisation. Prevention of cardiovascular disease: guideline for assessment and management of cardiovascular risk. 2007.
17. National Institute for Health and Clinical Excellence. Lipid modification: cardiovascular risk assessment and the modification of blood lipids for the primary and secondary prevention of cardiovascular disease. Clinical guideline 67. London: NICE; 2008.
18. Shepherd J, Blauw GJ, Murphy MB, Bollen ELEM, Buckley BM, Cobbe SM, et al. Pravastatin in elderly individuals at risk of vascular disease (PROSPER): a randomised controlled trial. *The Lancet*. 2002;360(9346):1623-30.
19. LaRosa JC, He J, Vupputuri S. Effect of statins on risk of coronary disease. *JAMA: the journal of the American Medical Association*. 1999;282(24):2340.
20. O'Keefe JH, Carter MD, Lavie CJ, Bell D. The gravity of JUPITER (justification for the use of statins in primary prevention: an intervention trial evaluating rosuvastatin). *Postgrad Med*. 2009;121(3):113-8.
21. Taylor F, Ward K, Moore T, Burke M, Davey Smith G, Casas J, et al. Statins for the primary prevention of cardiovascular disease. status and date: New, published in. 2011.
22. Mills EJ, Rachlis B, Wu P, Devereaux PJ, Arora P, Perri D. Primary Prevention of Cardiovascular Mortality and Events With Statin Treatments:: A Network Meta-Analysis Involving More Than 65,000 Patients. *Journal of the American College of Cardiology*. 2008;52(22):1769-81.
23. Ray KK, Seshasai S, Erqou S, Sever P, Jukema JW, Ford I, et al. Statins and all-cause mortality in high-risk primary prevention: a meta-analysis of 11 randomized controlled trials involving 65,229 participants. *Archives of internal medicine*. 2010;170(12):1024.
24. PHARMAC. Background about One Heart Many Lives. Fourth Year Medical Student Public Health Project Briefing. Otago University Wellington 2011.
25. PHARMAC. One Heart Many Lives. 2011 [cited 2011 June 28]; Available from: <http://www.oneheartmanyvives.co.nz/>.
26. World Health Organisation. The Ottawa Charter for Health Promotion. First International Conference on Health Promotion; Ottawa, Canada: WHO; 1986.
27. King A. The Primary Health Care Strategy. Wellington: Ministry of Health; 2001.
28. Ministry of Health. A Guide to Developing Health Promotion Programmes in Primary Health Care Settings. Wellington: Ministry of Health; 2003.
29. Durie M. Te Pae Mahutonga: a model for Maori health promotion. *Health Promotion Forum of New Zealand Newsletter*. 1999;49(December 1999).
30. Poutiri Trust. Our Philosophy. Te Puke, New Zealand: Poutiri Trust; [cited 2011 1 July]; Available from: <http://poutiri.com/AboutUs/OurPhilosophy.aspx>.

31. Pennant M, Davenport C, Bayliss S, Greenheld W, Marshall T, Hyde C. Community programs for the prevention of cardiovascular disease: a systematic review. *American journal of epidemiology*. 2010;172(5):501.
32. Action of Secondary Prevention through Intervention to Reduce Events Steering Group. A British Cardiac Society survey of the potential for secondary prevention of coronary disease: ASPIRE. *Heart*. 1996;75:334 - 42.
33. Anderson K, Odell P, Wilson P, Kannel W. Cardiovascular disease risk profiles. *Am Heart J*. 1991;121:203 - 8.
34. Bradley F, Wiles R, Kinmonth A, Mant D, Gantley M. Development and evaluation of complex interventions in health service research: case study of the Southampton heart integrated care project (SHIP). *BMJ*. 1999;318:711 - 5.
35. British Cardiac Society BHA, British Hypertension Society, endorsed by the British Diabetic Association,. Joint British recommendations on prevention of coronary heart disease in clinical practice. *Heart*. 1990;80 (Suppl 2:S1 - S29.
36. British Cardiac society BHA, British Hypertension Society, British Diabetic Association,. Joint British recommendations on prevention of coronary heart disease in clinical practice: summary. *BMJ*. 2000;320:705 - 8.
37. Campbell N, Thain J, Dean H, Ritchie L, Rawles J. Secondary prevention in coronary heart disease: baseline survey of provision in general practice. *BMJ*. 1998;315:1430 - 4.
38. Canadian Task Force on the Periodic Health Examination. Periodic health examination 1993 update: Lowering the blood cholesterol level to prevent coronary heart disease. *Can Med Assoc J*. 1993;148:521 - 38.
39. Groeneveld IF, Proper KI, van der Beek AJ, Hildebrandt VH, van Mechelen W. Lifestyle-focused interventions at the workplace to reduce the risk of cardiovascular disease - a systematic review. *Scandinavian Journal of Work, Environment & Health*. 2010;36(3):13.
40. Curtis E, Harwood M, Riddell T, Robson B, Harris R, Mills C, et al. Access and Society as Determinants of Ischaemic Heart Disease in Indigenous Populations. *Heart, Lung and Circulation*. 2010;19(5-6):316-24.
41. Wood DA, Kotseva K. Should cardiovascular disease prevention be undertaken by doctors or policymakers and politicians? *Dialogues in cardiovascular medicine*. 2009;14(2):83-98.
42. Pearson TA. The Prevention Of Cardiovascular Disease: Have We Really Made Progress? *Health Affairs*. 2007 January 1, 2007;26(1):49-60.
43. Hooper L, Bartlett C, Smith GD, Ebrahim S. Systematic review of long term effects of advice to reduce dietary salt in adults. *BMJ*. 2002;325(7365):628.
44. Ketola E, Sipilä R, Mäkelä M. Effectiveness of individual lifestyle interventions in reducing cardiovascular disease and risk factors. *Annals of medicine*. 2000;32(4):239-51.
45. Ebrahim S, Smith GD. Systematic review of randomised controlled trials of multiple risk factor interventions for preventing coronary heart disease. *BMJ*. 1997 June 7, 1997;314(7095):1666.

46. Brunner E, Rees K, Ward K, Burke M, Thorogood M. Dietary advice for reducing cardiovascular risk (Review). The Cochrane Library [serial on the Internet]. 2009; (1): Available from: <http://www.cochranelibrary.com>.
47. Lin JS, O'Connor E, Whitlock EP, Beil TL. Behavioral Counseling to Promote Physical Activity and a Healthful Diet to Prevent Cardiovascular Disease in Adults: A Systematic Review for the US Preventive Services Task Force. *Annals of internal medicine*. 2010;153(11):736.
48. Beswick A, Brindle P, Ebrahim S, Fahey T. Risk scoring for the primary prevention of cardiovascular disease (Protocol). The Cochrane Library [serial on the Internet]. 2009; (1): Available from: <http://www.cochranelibrary.com>.

## Appendices:

### Appendix A: Search strategies for Literature Review

#### Search Strategy for cardiovascular health promotion

(based on the University of Otago Search Strategy Worksheet)

Key words and concepts:

- health promotion (social marketing, health education, health marketing, community development, prevention, risk reduction)
- New Zealand (Aotearoa, Māori, pacific island)
- cardiovascular (heart, coronary artery disease, cardiac, vascular, atherosclerosis)
- guidelines (strategy, guide, protocol, recommendation, code)

Search statement: health AND (marketing OR promotion OR education OR prevention OR “risk reduction”) AND (cardi\* OR “coronary artery disease” OR atherosclerosis) AND (guide\* OR strategy OR protocol OR recommendation OR code) AND (Zealand\* OR Aotearoa OR Māori OR Pacific)

Database	Search statement	Number of hits
Google Scholar	health AND (marketing OR promotion OR education OR prevention OR “risk reduction”) AND (cardi* OR “coronary artery disease” OR atherosclerosis) AND (guide* OR strategy OR protocol OR recommendation OR code) AND (Zealand* OR Aotearoa OR Māori OR Pacific)  Limited to articles published since 1996 in medicine, pharmacology or veterinary science journals.	718

INNZ	health AND (marketing OR promotion OR education OR prevention OR risk reduction) AND (cardi* OR coronary artery disease OR vascular OR atherosclerosis) AND (guide* OR strategy OR protocol OR recommendation OR code) Limited to Journal Articles	44
Bandolier	health AND (marketing OR promotion OR education OR prevention OR risk AND reduction) AND (cardi* OR coronary AND artery AND disease OR atherosclerosis)	23
Cochrane	health AND (marketing OR promotion OR education OR prevention OR risk reduction) AND (cardi* OR coronary artery disease OR atherosclerosis) as keywords. Limited to reviews	116

Researchers filtered the results by hand to the most relevant papers and searched the reference lists of included papers.

#### Search strategy for evidence for statin use

The statins prescribed to the patients in OHML was used as one of the indicators to check the effectiveness of this program. Therefore, the efficacy and compliance of statin usage was assessed through a review of published literature related to the use of Statins. The review was spilt into 2 main areas:

1. What are the regulations and guidelines in lipid modification?
2. What are the benefits of Statin usage?

There are three sections to this literature review, the first two sections addresses the topic questions above while the last one summarizes all the findings. The search is restricted to English-language journals and the strategies used to search for journals or articles are listed below:

### **1. Regulations and guidelines in lipid modification**

A literature search was done through New Zealand guidelines group (NZGG) cardiovascular guidelines and the World Health Organization (WHO) website. Search was done online through the NZGG's and WHO's website. Keywords included "Statin", "Cardiovascular Lipid", and "Lipid modification guidelines", "lipid management", "New Zealand Lipid Guidelines" and "UK NICE Lipid Guidelines".

### **2. Benefits of statins**

Articles and journals used in this section were found through MEDLINE, Chocrane Library and bpac<sup>NZ</sup>. For MEDLINE, Chocrane Library and bpac<sup>NZ</sup>, keywords used were "Statin", "Statins", "Primary prevention", "Hypercholesterolemia", "Hyperlipidemia", "Effects of Statin "and "Benefits of statin". A total of 102 articles were found and assessed based on relevance to the topic. After further review, 20 articles were included in this section.

## Appendix B: Community Intercept Survey

Hello, my name is \_\_\_\_\_ and I am a Medical Student from the University of Otago. I am doing a survey on health in the local community and would like to ask you a few questions. It will take only a few minutes.

YES

NO

THANK YOU VERY MUCH FOR YOUR TIME

DO I HAVE YOUR PERMISSION TO USE THE INFORMATION FROM THIS SURVEY IN A HEALTH STUDY?

LOCATION OF SURVEY

GENDER

 MALE

 FEMALE

AGE

ETHNICITY      Maori  
                     Samoan  
                     Cook Island Maori  
                     Tongan  
                     Niuean  
                     Chinese  
                     Other

OCCUPATION/ROLE

Have you ever had a heart check?

☐ YES

☐ NO

Who did it?

- ☐ Doctor
- ☐ Nurse
- ☐ Other: \_\_\_\_\_

What did they do?

- ☐ Blood pressure
- ☐ Blood test
- ☐ Examination
- ☐ ECG
- ☐ Advice
- ☐ Other: \_\_\_\_\_

What prompted you to have a health check?



If No health check, have you ever been encouraged to have a health check? By who?

**Have you heard of One Heart Many Lives (OHML)?**

☐ YES

☐ NO

**How did you hear about it?**

**Have you had a heart check with OHML?**

☐ YES

☐ NO

If No what stopped you (i.e. unable to attend event due to location/ money/ transport)

**How useful did you find this check?**

☐ 1. Waste of time

☐ 2. Not useful

☐ 3. Moderately useful

☐ 4. Useful

☐ 5. Very useful



How often do you go to your GP?

☐ Once a month

☐ Once every 2 months

☐ Once every 6 months

☐ Once a year

☐ Only when sick

Have you ever been given drug that lowers the fat or cholesterol in your blood, for example Lipitor (atorvastatin), or Zocor/Lipex/ Arrow-Simba (simvastatin)?

☐ YES

☐ No

If yes, do you take them?

If you do not take them, why?

Do you think heart disease is a problem in this community?

What do you know about:

Blood pressure

Heart attack

Stroke

Cholesterol

Statins

Diabetes

Comment on the effect of the following on the heart

Smoking

☐ Good

☐ bad

☐ no effect

Exercise

☐ Good

☐ bad

☐ no effect

Being overweight

☐ Good

☐ bad

☐ no effect

Fatty food

☐ Good

☐ bad

☐ no effect

Alcohol

☐ Good

☐ bad

☐ no effect

Diabetes

☐ Good

☐ bad

☐ no effect

## Appendix C: Community Leaders Questionnaire

### ***Assessing the cardiovascular context***

1. What do you think are health problems for men in your community?
2. In studies Māori and Pacific Islanders have worse cardiovascular health. Do you have ideas why that is?

### ***One Heart Many Lives (OHML), past, present and future***

1. What do you know about OHML?
2. What do you see as the role of OHML in the local community?
3. Do you think people know about programmes such as OHML?
4. Have you seen any changes in the community in terms of attitudes, awareness or lifestyle changes that may be attributable to OHML?
5. Does OHML have the power to reach those who need help the most?
6. What improvements could be made to OHML?
7. Do you see OHML as a sustainable venture in the future?

### ***General Questions if no knowledge of OHML***

1. What kind of health services do you think Men over 35 would use
2. What would encourage men to have checkups

## Appendix D: List of CCDHB General Practitioners in Porirua

Dr Larry A Jordan (Tumai PHO)  
16 Mungavin Avenue, Porirua  
Phone: 04-237 8444 Fax: 04-237 8258

Kenepuru Accident & Medical Clinic  
Kenepuru Hospital, Rahia Street, Porirua  
Phone: 04-385 5999 Fax: 04-237 2034

Mana Medical Centre (Tumai PHO)  
107 Mana Esplanade, Paremata, Porirua  
Phone: 04-233 8019 Fax: 04-233 8056

Ora Toa Cannons Creek Medical Centre (Ora Toa PHO)  
178 Bedford Street, Cannons Creek, Porirua  
Phone: 04-237 5152 Fax: 04-237 5925

Ora Toa Mungavin Medical Centre (Ora Toa PHO)  
7 Mungavin Avenue, Porirua  
Phone: 04-237 6387 Fax: 04-237 6225

Ora Toa Takapuwahia Medical Centre (Ora Toa PHO)  
1 Te Hiko Street, Takapuwahia, Porirua  
Phone: 04-237 4503 Fax: 04-237 4579

Plimmerton Medical Centre (Tumai PHO)  
10 Steyne Avenue, Plimmerton, Porirua  
Phone: 04-233 8015 Fax: 04-233 8785

Porirua Union & Community Health Centre (Porirua HP)  
221 Bedford Street, Cannons Creek, Porirua  
Phone: 04-237 4207 Fax: 04-237 9747

Titahi Bay Medical Centre: Dr N Gaus (Tumai PHO)  
3 Whitehouse Road, Titahi Bay , Porirua  
Phone: 04-236 7700 Fax: 04-236 7734

Titahi Bay Surgery Ltd (Tumai PHO)  
76 Main Road, Titahi Bay , Porirua  
Phone: 04-236 8200 Fax: 04-236 8790

Waitangirua Health Centre (Tumai PHO)  
201 Warspite Avenue, Waitangirua, Porirua  
Phone: 04-235 9059 Fax: 04-235 9053

Whitby Doctors (Tumai PHO)  
Whitby Mall, Whitby, Porirua  
Phone: 04-234 1404 Fax: 04-234 1402

Maraeroa Marae Health Clinic  
128 Corinna St Waitangirua Porirua 5024  
Phone: 04-235 8000

Dr Gaus  
3 Whitehouse Road Titahi Bay  
Phone: 236 7700

## Appendix E: Primary Care invitation for research participation

One Heart Many Lives Evaluation Team  
Wellington School of Medicine and Health Sciences  
23a Mein Street  
Newtown

Tuesday 31 May, 2011

Kia Ora

We are a team of medical students from the University of Otago, Wellington School of Medicine and Health Sciences, Department of Public Health. As part of our Public Health run we are undertaking an evaluation of the health promotion initiative known as 'One Heart Many Lives'. Our evaluation project is a small, exploratory study designed to evaluate One Heart Many Lives. Our research aims are to establish the programme's impact on the targeted population; its impact on the clinical practice of primary care nurses and doctors; changes in the pattern of statin prescriptions; and the way in which it fits into the New Zealand health system and other population health initiatives delivered by DHBs, PHOs, and primary health care providers. The project also aims to provide a sound basis on which further evaluation of One Heart Many Lives may be undertaken, by identifying key themes, strengths, and weaknesses of the initiative.

An important part of the study is to get feedback from organisations like yours who have an interest in population health, health promotion, and potentially One Heart Many Lives. To this end, we would like to invite you to complete a survey as part of the research project.

Thank you for your support of this project. If you have any queries about the project, please contact our supervisors Dr Richard Jaine (04) 918 6155 or Dr Richard Edwards (04) 918 5089 at the Department of Public Health, Wellington School of Medicine and Health Sciences. If you have any questions for the evaluation team please contact us on [steem543@student.otago.ac.nz](mailto:steem543@student.otago.ac.nz) or cell phone 027 243 0813.

We look forward to receiving your surveys.

Nga mihi  
*Emma Stevenson*  
*4<sup>th</sup> year medical student*

## Appendix F: Primary Care research Participant consent form

# One Heart Many Lives Evaluation Project

### RESEARCH PARTICIPANT CONSENT FORM

I have read the Information Sheet concerning this project and understand what it is about. All my questions have been answered to my satisfaction. I understand that I am free to request further information at any stage.

I know that:

1. My participation in the project is entirely voluntary;
2. I am free to withdraw from the project at any time without any disadvantage;
3. The data (*surveys*) will be destroyed at the conclusion of the project but any raw data on which the results of the project depend will be retained in secure storage for five years, after which it will be destroyed;
4. The results of the project may be published but all information collected will be made anonymous (e.g. no names or identifying data will be published)

I agree to take part in this project                      Yes/No

.....

Signature of participant

Date

***This project has been reviewed and approved by the Department of Public Health, Otago University, Wellington.***

## Appendix G: Primary Care Survey for GPs

# One Heart Many Lives Evaluation

## Survey for GPs

### Demographic Information

1. Gender? M/F
2. What ethnic group do you identify with?

### Research Questions

3. What is your role?

.....

4. Which organization do you work for? .....

5. Have you heard about the One Heart Many Lives (OHML) project? Yes/No

6. How/where did you hear about OHML?

.....

.....

7. Have you been involved in it? How?

.....

.....

.....

8. What do you know about OHML?

.....

.....

.....

9. What do you see as the strengths of the programme?

.....

.....

.....

.....

10. Any weaknesses or areas for improvement?

.....

.....

.....

.....

11. Do you feel the programme is effective? Yes/No  
Why?.....  
.....  
.....
12. Does your practice/do you have a systematic approach to assessing cardiovascular risk? If so what does this involve?  
.....  
.....  
.....
13. Approximately what proportions of your Māori and Pacific male patients are currently prescribed statins?  
.....  
.....
14. What strategies do you use to increase compliance among Māori and Pacific males?  
.....  
.....  
.....  
.....
15. What strategies do you use to follow up Māori and Pacific patients in regards to cardiovascular risk?  
.....  
.....  
.....  
.....
16. What lifestyle education do you use when working with Māori and Pacific Island men?  
.....  
.....  
.....  
.....
17. Have you made any changes to your practice as a result of being involved with OHML? If yes, what?  
.....  
.....  
.....



.....

18. What community organisations do you refer patients with cardiovascular risks to, if any?

.....  
.....  
.....  
.....

19. Anything else you think we should know?

.....  
.....  
.....  
.....  
.....

Thank you for your participation.  
*Nga mihi*  
*The Public Health 4<sup>th</sup> year Group,*  
*University of Otago, Wellington.*

## Appendix H: Primary Care Survey for Nurses

# One Heart Many Lives Evaluation Project

### Survey for Nurses

#### Demographic Information

1. Gender? M/F
2. What ethnic group do you identify with?

.....  
.....

#### Research Questions

3. What is your role?

.....

4. Which organization do you work for?

.....

5. Have you heard about the One Heart Many Lives (OHML) project? Yes/No

6. How/where did you hear about OHML?

.....  
.....  
.....

7. Have you been involved in it? How?

.....  
.....  
.....

8. What do you know about OHML?

.....  
.....  
.....

9. What do you see as the strengths of the programme?

.....  
.....  
.....  
.....

10. Any weaknesses or areas for improvement?

.....

- .....
- .....
- .....
11. Do you feel the programme is effective? Yes/No  
Why?.....
- .....
- .....
- .....
12. Does your practice/do you have a systematic approach to assessing cardiovascular risk? If so what does this involve?
- .....
- .....
- .....
13. Approximately what proportions of your Māori and Pacific male patients are currently prescribed statins?
- .....
- .....What strategies do you use to increase compliance among Māori and Pacific males?
- .....
- .....
- .....
- .....
14. What strategies do you use to follow up Māori and Pacific patients in regards to cardiovascular risk?
- .....
- .....
- .....
- .....
15. What lifestyle education do you use when working with Māori and Pacific Island men?
- .....
- .....
- .....
- .....
16. Have you made any changes to your practice as a result of being involved with

OHML? If yes, what?

.....  
.....  
.....  
.....

17. Anything else you think we should know?

.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....

### **Nurse Training**

18. Have you received training from OHML? Yes/No

If so what did this involve?

.....  
.....  
.....  
.....

19. Has the training given you any new knowledge or skills?

.....  
.....  
.....  
.....

20. What practical problems have you encountered?

.....  
.....  
.....  
.....

21. What resources are you given/utilise?

.....  
.....  
.....  
.....

Thank you for your participation.

*Nga mihi*

*The Public Health 4<sup>th</sup> year Group, University of Otago, Wellington.*

## Appendix I: DHB/PHO semi-structured interview questions

### Semi-Structured Interview for DHB/PHO Staff Health Promotion Contact

1. What is your role in relation to population health/health promotion/cardiovascular risk reduction in the region?
2. What health promotion efforts are underway in your region?
3. How are they prioritised?
4. Are they targeted at different groups?
5. Have you heard of One Heart Many Lives? What do you think OHML is trying to achieve?
6. How does your service interact with OHML?
7. Does OHML interact with other providers in your region?
8. What do you see as the strengths of this type of intervention?
9. What do you see as the weaknesses of this type of intervention?
10. If the programme was starting again today, which parts of it would you keep?
11. What would you do differently?

12. What are the barriers to successful health promotion efforts at the moment as you see it?
13. Which do you consider to be the most pressing at present and why?
14. Apart from funding issues, are there other issues with health promotion?
15. Does OHML overcome any of these barriers?
16. Is there anything you would like to add?