REPORT ON THE TWO YEAR PILOT PROGRAMME

CARDIOVASCULAR RISK ASSESSMENT & MANAGEMENT PILOT

MANAIA HEALTH PHO

MARCH 2009
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1. EXECUTIVE SUMMARY

In October 2006 approval was given by the Northland DHB / MAPO to fund a SIA (Services to Improve Access) cardiovascular (CV) risk assessment and management pilot programme. Cardiovascular (CV) screening was implemented in nine sites over a period of two years—five general practice, two industry and two community group sites. The pilot was for two years from December 2006 – December 2008. This report provides data and feedback from the pilot and offers recommendations to guide future planning for cardiovascular screening within Manaia Health PHO.

A successful CV screening programme requires a whole team approach which is multi-facet and responsive to the needs of the community. The three different approaches trialed within the pilot all had advantages, disadvantages and challenges. The general practice approach provides the most seamless pathway of care for identifying risk and providing ongoing management and is optimum but, due to limited hours of access, is restrictive for some priority groups. CV screening in identified industries where the workforce is predominantly young male Maori / Pacific has potential to be the most targeted approach engaging a younger group who traditionally do not access general practice. The challenge within the industry setting is ensuring people who are identified at high risk are supported to access on-going treatment and management by a primary care provider who, optimally, is the general practice team. This is restrictive for people who work as currently, within Manaia Health, no general practices offer extended hours of service. Likewise, community sites can provide targeted screening but lack the robust pathway for on-going care and management due to the potential for people to get ‘lost’ between assessing CV risk and referral to a primary care provider.

The decision support tool Predict is a quick and easy way to assess absolute cardiovascular risk in general practice and community settings taking between five and ten minutes. Predict provides a valuable repository for data collection and reporting. The pilot highlighted inconsistency with the use of Predict within general practice within Manaia Health PHO.

Lifestyle management is a key nursing role and an essential component of CV screening. Initial lifestyle advice and management for people assessed as having >15% CV risk takes an average of forty-five minutes. People with elevated CV risk can appropriately receive on-going life-style management through the CarePlus programme which entitles the patient to have four free visits a year – the first visit being with the general practitioner for medication management. Smoking cessation can be offered through CarePlus enabling this to be a no-cost service for patients.

The main goal of the pilot programme was to risk assess, manage and reduce absolute cardiovascular risk in identified high risk population groups, these being Maori / Pacific males >35 years and Maori / Pacific females >45 years.

- **Risk assess high risk populations** - The pilot programme achieved the goal to reach and screen high risk groups- 52% were Maori / Pacific and 62% were male.
- **Manage** - All people screened were given life-style advice at the time of the assessment. Those assessed as CV risk >15% were given more specific life-style advise about individual risk factors (smoking, nutrition and exercise) and were referred to their GP for medication management. In the general practice sites 90%
of those with >15% CV risk were additionally given life-style management by telephone by the registered nurse - using the Nursing Intervention Tool - at 2 weeks, 4 weeks and thereafter monthly. Mid-way through the pilot programme the Manaia Health Clinical Committee approved enrollment to the CarePlus programme for people with >15% CV risk who had one other long-term condition. 85% of people assessed within the pilot programme within general practice were enrolled onto CarePlus for ongoing active management by the general practice team.

- **Reduce absolute cardiovascular risk** - After one year 48.6% of participants in the general practice sites had either maintained or lowered their CV risk.

The Cardiovascular Risk Assessment & Management Pilot Programme implemented in nine community settings throughout the Manaia Health PHO met the objectives of the pilot. The results and outcomes will be useful for informing and guiding future work.

### 2. PILOT PROGRAMME SUMMARY

As well as promoting the use of best practice guidelines in CV risk assessment and management a key objective of the pilot programme was to develop and implement a range of approaches to CV screening to assess the issues of access and suitability and to ascertain the amount of time required to complete CV risk assessments.

**Summary by site:**

**General practice sites** - Targeted screening was possible due to the process of identification through the Patient Management System (PMS) - 61% accessing the screening were Maori / Pacific. Referral to the GP for diagnosis and medication management for people identified with >15% CV risk was managed and supported. The Nursing Intervention Tool and the CarePlus programme allowed a clearly defined pathway of care for on-going management by the general practice team. This included an opportunity for free-to-the-patient smoking cessation support through CarePlus. No after-hours service was offered. The average age of people risk assessed in the general practice sites was 61.7 years. The average length of time taken to do the risk assessment using Predict interfaced with MedTech was 5 minutes. The average length of time taken to give life-style advice and education about lowering CV risk was 40 minutes. Total average time for the initial screen / management in the general practice sites = 45 minutes.

**Industry sites** – Targeted screening by ethnicity was not possible within the industry site as all employees on site were invited to have a ‘free heart health check’ – 13% accessing the screening were Maori / Pacific. Access to screening was encouraged and supported by industry management with employees attending the ‘free heart health check’ in paid work time. Following the CV screen a letter was sent to the GPs of the employees advising of the outcome of the CV risk assessment. There was no clearly defined pathway for on-going management for the employees in the industry sites - follow-up and management was dependent on informal contact between the occupational health nurse and the employee. Some employees did not have a GP – they were encouraged to enroll with a general practice for their on-going care. There is no evidence from the Predict data base that employee with >15% CV risk received active management within a general practice. The average age of people assessed
in the industry sites was 50 years. The average length of time taken to do the risk assessment using the web-based version of *Predict* was 10 minutes. The average length of time taken to give life-style advice and education about lowering CV risk was 40 minutes. Total average time for the initial screen / management in the industry sites = 50 minutes

*Community sites:* Targeted screening was possible within the two community groups - 70.6% accessing the service were Maori / Pacific. Following the CV screen and giving initial life-style advice the registered nurses sent a letter to the participant’s GPs advising of the outcome of the CV risk assessment and recommending they be enrolled onto CarePlus if >15% CV risk. There is no evidence from the *Predict* database that these people are now on active management within a general practice. Follow-up and management within the two community groups was dependent on informal contact between the nurses connected to the two sites. One community site offered screening in the evening which was well supported with 80% uptake. The other site offered an early breakfast / health promotion session enabling the collection of fasting blood samples prior to screening during normal work hours. The average age of people assessed in the community sites was 46.9 years. The average length of time taken to do the risk assessment using the web-based version of *Predict* was 10 minutes. The average length of time taken to give life-style advice and education about lowering CV risk was 40 minutes. Total average time for the initial screen / management in the community sites = 50 minutes

After one year 48.6% of participants in the general practice sites had either maintained or lowered their CV risk. Of this group all have been seen by their GP for medication management; five are identified as having stopped or cut-down smoking; all are reported to have made some change in their diet and level of activity.

The pilot programme highlighted that the use of *Predict* is variable amongst general practice teams. There was evidence that people assessed as having >15% CV in industry / community settings were not entered onto the general practice *Predict* database (taking into account that some people will have chosen not to visit their GP for their follow-up appointment). Similarly, patients within general practice who had been invited for a CV screen but who did not respond and who were subsequently seen for other medical reasons were not offered an opportunistic CV screen. Some patients with >15% CV risk who were reassessed after 12 months had their results entered into the patient record on Medtech but results were not recorded in *Predict*.

### 3. RECOMMENDATIONS

1. The information contained in this report to be used as part of future planning for the ongoing development, implementation and management of CV risk assessment within the Manaia Health PHO.

2. Manaia Health to assist and support general practice to actively and opportunistically screen patients within their practice population to enable early intervention. A short-term appointment of a ‘CVD / *Predict* Coordinator’ would enable ‘hands on’ support to drive this within general practice.
3. Manaia Health to develop an out-reach industry-based CV screening service to reach the target groups most at risk who, due to the fact they are at work, are unable to access general practice.

4. Consideration to be given to extending hours within a pilot general practice site to enable access to screening services / CarePlus / smoking cessation programmes for people who are unable to access primary care services during the day.

4. BACKGROUND:
Cardiovascular disease (CVD) is the leading cause of death in New Zealand, accounting for 40% of all deaths. While age-standardised mortality has halved over the past 30 years, the total number of deaths from cardiovascular disease has changed little because of the growing number of older people and at-risk individuals. The burden of cardiovascular disease falls disproportionately on Maori and also lower socioeconomic groups at a younger age (The Assessment and Management of Cardiovascular Risk, 2003).

The following key points provided some specific and compelling data which supported the proposal to focus on targeted CVD screening, particularly in the context of reducing inequalities and enhancing access to services for Maori.

- Maori death and disease rates from cardiovascular diseases is significantly higher than non-Maori
- Ischaemic Heart Disease (IHD) is the leading single cause of death for Maori
- The earlier onset of disease among Maori is also significant, with IHD representing the leading cause of death for Maori from age 25 years onwards, compared with non-Maori from age 65 years onwards
- Cardiovascular disease mortality generally, and IHD specifically, in New Zealand have been declining, however the decline in Maori cardiovascular mortality has occurred more slowly. This has led to an increase in disparities.
- The 1996-1999 Maori male IHD mortality rate in the 35-64 year age group was 3.4 times that of the non-Maori, non-Pacific male rate; for 65-74 year old Maori males the rate was just over twice that of non-Maori, non-Pacific males
- In the same period, for female Maori in the 35-64 year age group the mortality rate from IHD was 5.6 times that of non-Maori, non-Pacific females; for 65-74 year old Maori females the rate was 3.3 times the non-Maori, non-Pacific females.
- Of the four northern region District Health Boards, Northland has the highest IHD mortality rate, and the rate is higher (by almost 10%) than the total New Zealand IHD mortality rate.
- For the 1996-98 periods, the Northland Maori rate of IHD mortality was 78% higher than the total Northland rate, and compared with all New Zealand Maori, the Northland Maori IHD mortality rate was 22% higher.
- Overall, 36% of IHD amongst New Zealanders is considered to be potentially avoidable, while in the Maori population, 78% of IHD is considered to be potentially avoidable ~ these differences reflect, for the most part, the younger age at which Maori acquire IHD.

It is thought that a significant reduction in avoidable mortality could be achieved through a combination of population level interventions, including those targeted to
improving the social and economic position of the less well off in New Zealand, individual behaviour change, early detection and treatment usually in the primary care setting, and existing medical or surgical treatments (MOH, 1999).

‘The Assessment and Management of Cardiovascular Risk’ (2003) best practice guideline notes that cardiovascular disease can be reduced through lifestyle change and appropriate drug therapy. Treatment decisions are based upon the likelihood an individual will have a cardiovascular event over a given period of time. By knowing the risk level an individual and their practitioner can make decisions for prevention and treatment of CVD, including lifestyle advice, diabetes care, and the prescription of lipid-modifying and blood pressure lowering medication.

The Cardiovascular Risk Assessment and Management Pilot focuses on early detection and management of cardiovascular disease, targeting those population groups most ‘at risk’ (i.e. Maori / PI, and those who are socio-economically disadvantaged). The pilot programme was implemented by practice, occupational health and community-based registered nurses and was co-ordinated and supported by the Clinical Manager and Nursing Integration Leader, Manaia Health PHO.

5. GOALS AND OBJECTIVES OF THE PILOT PROGRAMME

Goal:
To risk assess, manage and reduce absolute cardiovascular risk in identified high risk population groups (i.e. Maori / Pacific; Quintile 5)

Objectives:
- To develop and implement a range of approaches to targeted CVD risk assessment and management in ‘pilot’ general practice, industrial and community settings
- To evaluate the effectiveness of the pilot programme
- To ascertain nursing hours required to undertake the programme in the pilot sites
- To promote the use of best practice guidelines in CVD risk assessment and management
- To encourage general practice teams to develop linkages with, and knowledge about, their communities

6. PROJECT DESCRIPTION

Participation: There were two stages to the pilot programme;

   **Stage 1 (2007 – 2008) (General Practice & Industry sites)**
   Registered nurses in five general practice sites and two industry sites offered free CV screening. People who were assessed with CV risk >15% were given on-the-spot information and education about their identified risk and what measures could be taken to reduce their risk. The nurses used the ‘What if?’ tool on the Predict programme to demonstrate reduction of risk. Scenarios of reducing risk by reduction in weight, smoking and cholesterol were demonstrated. Following the initial assessment all people with an identified CV risk >15% were referred to their GP. Additionally they were offered support
and management for the following 12 months to assist the reduction of CV risk.

In the general practice sites 55 (90%) of the people assessed with >15% risk participated in follow-up telephone consultations with the nurse. The Nursing Intervention Tool (see P. 9) guided the telephone consultation to ensure appropriate questions were asked. Additionally 55 people (90%) seen in general practice were eventually registered on the CarePlus programme for ongoing support and management.

NB: The clinical pathway for enrolment onto the CarePlus programme for people assessed as >15% CV risk was approved by the Manaia Health Clinical Committee half way through the pilot

In the industry sites the occupational health nurses gave, where possible, one-to-one support and advice to those people assessed with >15% CV the year following the initial risk assessment.

Stage 2 (2008) (Community groups)
Two community groups on two different sites were contracted to provide CV screening. A locum registered nurse was employed for one site and a registered nurse employed by the site’s health centre provided the screening at the second site. People assessed with CV risk >15% were given information and life-style advice at the time of the assessment. They were then referred to their GP for follow-up with a recommendation they be enrolled onto the CarePlus programme.

Letters were sent to the GP’s of all people assessed in the community sites regardless of their assessed risk.

Training:
2007; An initial one day training session was held for the nurses participating in the pilot. Dr. Sue Wells, Senior Lecturer, Clinical Epidemiology & Biostatics, University of Auckland provided the clinical over-sight. David Thompson, Sales Director for Enigma provided the practical teaching for using the Predict tool.

The focus for the training session was;
- To review best-practice guidelines in regards to CVD risk assessment and management
- To become familiar with using the Predict decision support tool
- To use different patient scenarios to provide practical ‘what if’ solutions and guidelines

A further half day training was held prior to the commencement of the pilot for the nurses to familiarize themselves with the Nursing Intervention Tool, a tool to run in tandem for the pilot to assist with the ongoing monitoring and management of people assessed as having >15% risk. The Nurse Intervention Tool was developed by the project leaders with Enigma staff to both guide the on-going life-style management and assist with the collation of information about nursing work / interventions.

2008; During the second year of the pilot a ‘Healthy Heart Symposium’ was held in July 2008 for practice nurses to raise general awareness of CVD and the use of Predict. The purpose of the symposium was to encourage all practice nurses to screen patients opportunistically as part of their general assessment. The Heart
Foundation supported this training which included a ‘real life’ *Predict* assessment demonstration.

A Continuing Medical Education (CME) session was held in June 2008 for general practitioners and practice nurses. Dr Sue Wells presented ‘Review of Cardiac Best Practice Guidelines’ as well as an overview of the ‘cardiac trajectory tool’ developed by Enigma and the NZ heart Foundation.

The following steps outlined in ‘The Assessment and Management of Cardiovascular Risk (NZGG, 2003) have been implemented within the pilot sites.

**Step one:**

**Select people for risk assessment**

*General practice;* potential participants were identified from the practices Patient Management System (PMS) with the target population predominantly Maori / Pacific (men > 35 years, women > 45 years), and those people identified as Quintile 5 (men > 45 years, women > 55 years). Identified patients were invited to have a ‘free heart health check’ by letter which included an information pamphlet (see appendix i & ii p.28, 29). One general practice offered an incentive of a lucky draw to win an ‘ugly stick fishing rod and reel’ to encourage men to have a free heart health check. Ten men took up this offer.

*Industry sites;* following a presentation about the project to the management team, all employees were sent a letter encouraging them to attend for a ‘free heart health check’. There was an immediate positive response from the employees. Some people requested a check as a response to encouragement by people who had already had an assessment. Word-of-mouth was a key advertising component in the industry sites. Employees attended the ‘free heart health check’ in paid time.

*Community sites;*

At one community site an evening presentation about cardio-vascular disease risk and the importance of early detection was attended by 28 people. Following the presentation a nurse, who regularly linked with the group and had a close working relationship with the members, engaged with the identified group to encourage men to have a CV screen.

At the second community site the registered nurse (who worked within the site’s health centre) engaged with a group of men to deliver a health promotion session along with a free healthy breakfast prior to taking fasting blood samples. Following this, over a period of weeks, the students attended the Health Centre to have their CV risk assessment.

**Step two:**

**Measure and record risk factors**

In all screening sites it was a registered nurse who undertook the cardiovascular risk assessment and initiated the appropriate care pathway depending on the identified risk level.

Initially it was anticipated that the health providers would select a range of approaches to deliver the service – for example, scheduled appointments and / or unbooked clinics, after-hours clinics and / or clinics within the normal working day, on-site clinics and/or community based clinics. In reality only one
community site offered screening out of normal working hours. The general practices, industry sites and one community clinic delivered the service within normal working hours.

Where it was possible fasting blood tests were taken prior to the appointment to enable a comprehensive risk assessment to be undertaken. A point-of-contact blood analyzer was used for the screening done within one of the community sites. In the industry sites non-fasting blood results from previous health assessments were sometimes used if it was not possible to get a fasting blood result - if results of the Predict assessment were abnormal a fasting blood test was consequently ordered.

Prior to undertaking the risk assessment, the nurse ensured the person understood the purpose of the screening programme and potential implications. An explanatory pamphlet was given to each participant.

Following verbal agreement to continue the nurses conducted a comprehensive cardiovascular risk assessment, measuring and recording the following: age, gender, ethnicity, smoking history, fasting lipid profile, fasting plasma glucose, average of two sitting blood pressures, family history, waist circumference, body mass index. This information was recorded on the Predict template. In the general practice and industry sites permission was sought for the nurse to provide on-going management over 12 months for people assessed with CV risk >15%. In general practice this was done by telephone at 2 and six weeks and thereafter every 3 months. In the industry sites support and ongoing management was done opportunistically by the occupational health nurse.

**Step three:**

Risk assessment

5-year cardiovascular risk was calculated using the Predict electronic decision-support tool which is based on the Framingham risk equation for first cardiovascular events. Management guidelines were available through the electronic clinical decision support tool Predict which is based on the national cardiovascular guidelines. Participants were given a copy of their individualised cardiovascular risk assessment, together with an explanation of the result. At the same time the nurse gave appropriate advice on life-style choices and how these affect the level of risk. ‘What if’ scenarios were given to the participants using the Predict tool enabling the participants to visualize changes to their assessed risk by making life-style changes. This was particularly useful when demonstrating the effects of lowering cholesterol and reducing or eliminating smoking.

**Steps four & five Decide appropriate lifestyle and drug interventions and set individual-specific realistic targets**

All treatment decisions were based on an individual’s 5-year absolute cardiovascular risk. For those patients assessed as having CV risk >15% the nurses worked in partnership with the GP, and interventions were based upon the NZGG recommendations. These clearly identify patient management for low, medium and high absolute cardiovascular risk. The Predict tool provided clinical decision support advice for individual patients.
The length of time required to undertake the initial risk assessment and discuss lifestyle modifications and treatment options varied. The time range was 30 minutes to 90 minutes with the average time for an initial consultation being 45 minutes. The time spent did not reflect the level of cardiovascular risk determined as people assessed as low risk would take the same length of time as people assessed as high risk.

The project leader accessed a range of resources to support the nurses’ work and interventions in both the general practice and industry settings. A resource kit was collated and distributed to each screening site (see appendix iv p.31).

Depending on the cardiovascular risk and risk factors the nurses undertook a range of therapeutic interventions, including the following:
- lifestyle advice on a cardio protective dietary pattern
- physical activity including referral to green prescriptions
- smoking cessation.
- Making a follow-up appointment with the GP if drug therapy was indicated (i.e. if cardiovascular risk > 15-20% or > 20%).

Advice was based upon best practice guidelines supported by relevant resource material, and delivered in a manner that supported the person in making lifestyle choices.

Step six:
Arrange follow-up and monitoring

People whose cardiovascular risk assessment was calculated as less than 15% were given general and / or specific lifestyle advice on a cardio protective dietary pattern, physical activity and smoking cessation. This was undertaken at the time of the risk assessment with the overall aim being to provide lifestyle advice to reduce cardiovascular risk. These groups require a follow-up cardiovascular risk assessment in 5 to 10 years (if < 10%), or in 5 years (if 10-15% risk) – in the industry and community clinics this follow-up is the responsibility of the individual and no further interventions will be required as part of the targeted screening programme. A letter was sent to the GPs of all people screened no matter what their assessed risk.

People whose cardiovascular risk was calculated at > 15-20% or > 20% required a more intensive approach at the time of the initial assessment.

General practice; In addition to appointments made with the GP and other health professionals, the nurse, over a 12 month period, attempted to maintain regular telephone contact with the clients assessed >15% CV risk to reinforce the initial advice given, to answer questions that arose, and to follow-up on whether referrals have been actioned and progress made in relation to goals set (e.g. green prescription, involvement in physical activity, progress with smoking cessation). To ensure this follow-up was consistent, timely and evidence-based the nurses used the newly developed Nurse Intervention Tool which guided the regular telephone monitoring over the 12 months period. This concluded, where possible, with a second risk assessment undertaken 12
months following the initial assessment. Following the pilot all patients with a risk >15% were automatically enrolled on the CarePlus programme with the overall goal is to at least achieve a 5-year cardiovascular risk of less than 15%.

Industry sites; following the initial ‘free heart health check’, the occupational health nurse sent a letter to the employee’s GP informing them that the CVD check had been done, whether the risk was <15% or >15%, and whether there was any further follow-up required (see appendix iii, 30). The occupational health nurse formally and informally monitored progress of the employees with CV risk >15% over the following 12 months.

Community sites; in one community site the locum registered nurse notified the client’s GP of all results following the CV screen. The enrolled nurse employed to work alongside the community group will continue to monitor ongoing progress and provide support with making lifestyle changes at the request of the group members. At the second community site the Health Centre nurse notified the student’s GP of the results following the CV screen and is continuing to monitor progress and provide on-going support to participants as requested.

7. RESULTS:

![OVERALL CARDIOVASCULAR RISK Graph]

**TOTAL NUMBER RISK ASSESSED = 396**
TOTAL NUMBER RISK ASSESSED = 396

**BY GENDER**
- **MALE:** 244 (62%)
- **FEMALE:** 152 (38%)

**BY ETHNICITY**
- **MAORI:** 191 (48%)
- **NON-MAORI:** 185 (47%)
- **PI:** 20 (5%)

**BY AGE**
- **<35:** 12 (3%)
- **35-44:** 74 (19%)
- **45-54:** 69 (17%)
- **55-64:** 98 (25%)
- **>65:** 143 (36%)
GENDER - ETHNICITY - AGE - BY SITE

Gender - General practice:

Gender - Industry:

Gender - Community clinics:
AVERAGE AGE RELATED TO SITE

<table>
<thead>
<tr>
<th>Site</th>
<th>Average Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Practice</td>
<td>61.7</td>
</tr>
<tr>
<td>Industry</td>
<td>50</td>
</tr>
<tr>
<td>Community Sites</td>
<td>46.9</td>
</tr>
</tbody>
</table>
TOTAL NUMBER RISKED ASSESSED >15% = 81

NUMBERS > 15% BY SITE

<table>
<thead>
<tr>
<th>Site</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Practice</td>
<td>61</td>
<td>75.3%</td>
</tr>
<tr>
<td>Industry</td>
<td>11</td>
<td>13.6%</td>
</tr>
<tr>
<td>Community</td>
<td>9</td>
<td>11%</td>
</tr>
</tbody>
</table>

BY GENDER >15%

- Male: 55 (68%)
- Female: 26 (32%)

BY ETHNICITY >15%

- Maori: 49 (60%)
- Non-Maori: 25 (31%)
- Pāi: 7 (9%)
Table 1: Results of follow-up CV risk assessment after 12 months for people assessed >15% in general practice and industry sites:

<table>
<thead>
<tr>
<th>Risk ↓</th>
<th>Risk =</th>
<th>Risk ↑</th>
<th>Clinically High</th>
<th>Not reassessed</th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
<td>* 19</td>
<td>10</td>
<td>19</td>
<td>8</td>
</tr>
</tbody>
</table>

- 48.6% participants either *maintained or lowered their CV risk after one year
- 13.8% participants had an elevated risk after one year
- 100% participants were referred to their GP for follow-up following the initial CV risk assessment

**NB:** * Age is a risk factor when assessing absolute CV risk.
Patient feedback:
A patient questionnaire was distributed to the participants either at the time of the initial assessment or mailed following the free heart health check (see appendix v p.31). A stamped addressed envelope was attached and returns were received and collated by the project leader, Manaia Health PHO. A total of 300 questionnaires were distributed with 89 returns (29.6%). Not all respondents answered every question and some respondents gave more than one answer.

What was the most important thing you learned from having the Heart Health Check?
- Affirmation about having good heart health – 25%
- Information about diet / weight – 17.5%
- Information about body function (cholesterol, BP) – 17.5%
- Learning % risk score – 10%
- Information about exercise / fitness – 8.7%
- Nothing – 3.75%
- Information about smoking – 1.25%

General comments:
The health check is only good for verifying symptoms, fails to account for causes – very narrow in its diagnosis
I need to keep having these checks
I’m not as stressed as I thought – risk is more than I thought due to genetics
Never take your health for granted

What changes have you made since having your Heart Health Check?
- Diet – 50%
- Exercise – 36.25%
- None – 17.5%
- Reducing stress – 5%
- Smoking – 2.5%

What were the most useful parts of the Heart Health Check?
- Increasing my understanding about my health - 61.25%
- Having time to discuss my heart health with the nurse – 56.25%
- Knowing my % risk score – 53.8%
- Receiving written information about heart health – 40%

Have you recommended having a Heart Health Check to any other people?
- Yes – 58.8%
- No – 41.2%

Of those who responded ‘yes’ to whom did you recommend having a Heart Health Check:
- Family – 44.6%
- Friend – 44.6%
- Work colleague – 19%
* Several respondents named individuals
Have you any ideas / suggestions for encouraging more people to have a free Heart Health Check?

- Advertise in newspapers – 27%
- Word-of-mouth – 14%
- Email employees in workplaces – 8%
- Advertise free clinic at GP – 8%
- TV advertising – 8%
- Educate young people in secondary schools – 4%

Other one-off suggestions included:

- Educate people about cholesterol
- Target 30 – 40 year olds
- Run a seminar / talk to classes / caravan in mall
- GP to encourage patients
- Hold a ‘Biggest Loser’ weight-loss competition
- Make the service available to staff as well as students
- Publish results of work-place screening

General comments:

Even skinny lean people are prone to heart problems too
I thought we were lucky to be part of this health check

Health provider feedback:

Nurses:
The nurses from the GP and industry screening sites were interviewed by phone up to 3 times during the first year of the pilot; met in a focus group in October 2007; and sent feedback by fax at the end of the first year. For the community sites verbal feedback was given as well as a written report.

Responses:

What worked well with the pilot?

- The patients are very appreciative of having extra time for me to explain everything especially cholesterol, what is good and what bad cholesterol is.
- Predict is a very useful and easy tool to use
- The Nursing Intervention Tool was useful for guiding the management follow-up- a good reminder and checklist
- The patients like the printed part of Predict, the patient summary. It is a good tool to generate discussion and to highlight ‘fear factor’ of the risk assessment.
- Clients appreciate having time to have things explained and ask questions
- The separate clinic away from the busy, main part of the Medical Centre is ideal. It is quiet, all equipment is there and there are no interruptions or distractions.
- Very satisfying work. It is proactive and making a difference to patient’s lives – really enjoyed the initial assessment and repeat risk assessment after 12 months – did not enjoy the monitoring as much
- Using the ‘what if’ tool on Predict is useful particularly for reduction of smoking
- If the patient needs to see the GP cost does not seem to be a deterrent
• Referring patients with >15% assessed risk to CarePlus is an excellent pathway of care and means patients do not have to pay for their follow-up / monitoring
• Patients assessed as 10-15% risk may have individual risk factors which are not being picked up and managed. Earlier re-calls are required for this
• The resources and the education sessions provided by the PHO were very useful
• Very good / most useful when the patient attended with their spouse as this got them talking about healthy options

What are the challenges?
• Getting Maori men to access. There have been a few DNA (did not attend)
• Lack of responses to the mail outs (average uptake was 30%)
• Patients are not sick so they think, why do they need to come?
• Getting hold of people by phone to offer the management – this could be better done after hours on land-lines
• Admin staff do not understand the difference between CVD and CarePlus programmes and sometimes they do not book an hour for protected time for the CVD assessments
• Hard to fit the CVD assessments into general duties during the week
• Missed opportunities to screen non-responders (23 of 99 non-responders had a subsequent consult with GP or Rx from a nurse over the phone). At the consult time some patients had some degree of cardiac assessment but the CV risk assessment project was not discussed.
• GPs do not link into the management advice / guidelines given to the patients
• Security issues have not allowed after-hours screening in general practice
• Phone follow-ups during the day are difficult because people are working-telephoning in the evening would be better
• Industry sites have difficulty getting fasting bloods done
• Becoming familiar with the Nurse Intervention Tool (NIT) is more difficult because of the relatively low numbers of patients it is harder to become familiar with the tool.
• Using the Profile Patient Management System was difficult as it does not inter-face with Predict.
• Would recommend another face-to-face consult at 6 months in lieu of a telephone contact

What did you do to overcome the challenges?
• Sent letters & pamphlets to the women with the hope they will encourage the men to come forward
• As the GPs were not accessing the information from the initial Predict assessment I started writing the recommendations in the consultation notes as well so that they could be easily seen
• Raised awareness of the CVD pilot with other practice staff so they could refer patients to the programme
• Ensured there was at least one hour of protected time for initial assessment
• Considered, but then didn’t hold after hours & Saturday morning clinics
• Talked to partners / sisters / mothers to encourage men to access
Sent out a second mail-out inviting Maori women for a check and for them to invite the men.

Used existing non-fasting blood results and if abnormal result then got a fasting blood. (Better to go ahead with Predict assessment than not do it).

**How effective was the overall approach to the targeted CVD risk assessment / screening pilot at your practice?**
- Great training & support from the PHO & Enigma staff
- Great support from our GPs for the programme
- The pilot was not discussed with me just added to my case-load
- I was initially apprehensive about it

**What were the main obstacles you faced with reaching the target group of patients?**
- Very difficult to get Maori men and women to respond
- Patients not reading the brochure properly and turning up expecting something different
- General practice hours restrict access for younger people

**What were some of the issues / obstacles you had to face within the practice site?**
- Found it hard to fit in with existing clinic commitments due to lack of time
- Appointment schedules mucked up often by admin team who did not discuss with patient whether it was CVD or CarePlus.
- Profile did not have the same tools as MedTech
- Members of the practice team did not follow up opportunistic intervention when patients accessed for other health reasons

**Of the patient resources provided which ones did you use the most frequently?**
- Heart Foundation flipchart – wonderful
- ‘Reducing your risk of heart attack & strokes’ – National Heart Foundation
- ‘The power to control cholesterol is in your hands” Pfizer leaflet
- ‘Heart Healthy Dietary Pattern’ – National Heart Foundation
- Green Rx
- To save time I gave every patient a selection of resources which I had made up into a hand-out pack

**Additional comments:**
- Started with a bang at the practice but I found as you wore on CarePlus commitments took off and there was less time for Predict / CVD
- Perusal of patient records allowed me to note those patients who would benefit from better management elsewhere e.g. enrolment on CarePlus
- Great support resource box
- Lots of intense learning / training
- Enjoyed meeting these people and having time to build rapport
Other health provider feedback:

General practitioners:
A short questionnaire was faxed to each of the 5 general practice sites at the end of the first year of the pilot. Three responses were received.

What aspect of the CVD / Predict pilot is working well for you & your practice?
- Awareness for doctor & patient increased
- Getting a long enough time with the nurse to fully discuss all aspects of CVD health
- GP doesn’t always have time to check CVD risk factors per patient. This is a safely net to screen all patients in age group for CVD risk
- An opportunity for a ‘lifestyle check’
- Good connection with the Quit counsellor

What are some of the challenges?
- Lack of time, another statistical collection, little reward to patient looking at the time spent by the nurse
- Getting patients to respond to initial invitation
- Getting patients to keep / attend the appointments x 2
- Appropriate advise which makes a lasting difference
- Concern that Predict may under-estimate risk in our patients

What changes can you suggest would address these challenges?
- Being able to have CV screening at work or in evenings to get more men to attend
- Screening in other sites e.g. Marae and industry
- More advertising and social marketing about CVD
- Fasting bloods to be taken at work so able to get results needed to assess CVD risk
- More intensive follow-up with whanau and groups
- Resources/practitioners to be culturally acceptable

Overall how effective is the approach to the targeted CVD risk assessment / screening pilot working in your practice?
- I thought it was great – great assistant to doctor as we got to see the >15% risk patients
- Know all potential patients at risk had a chance to get screened.
- Small reward for large time-consuming project
- Difficult to assess at this point, seemed popular with those that came but whether it makes a lasting difference remains uncertain

Please give any additional comments:
- Follow up started for the >15% risk time consuming for practice nurses.
- Positive experience and I think an important part of GP work in the present and future. Would like to see it continue
- I would appreciate an opportunity to discuss my concern about under-estimation of risk with a Predict advisor
Nurses from the industry and community sites:
What worked well with the pilot?
- It was a great opportunity to really get to know groups within our organisation
- People have accessed the on-site Health Centre following the CV screening asking for follow-up blood tests
- The CV screening raised awareness within the campus about Manaia Health PHO and what they can offer
- Tutors and administration staff wanted to participate in the screening
- Management supported the CV screening and encouraged participation
- Having a healthy breakfast following taking fasting bloods worked well as good opportunity for health promotion
- Running a health promotion ‘Men’s Health Night’ was a good way to launch the CV screening in one community site.
- It was important to work with management prior to commencing the CV screening
- There was potential for continuing follow-up & management in all sites as relationships had been established with the participants.
- In industry sites employees talked amongst themselves comparing their CV ‘score’

What were the challenges?
- It was challenging getting Maori to access for screening in one community site
- Other people not eligible for the screening under the pilot project criteria, put pressure on the nurses to provide a CV screen. They were advised to access their GP.
- Some men in one community site did not have GPs. They were encouraged to enroll with a GP.

8. DATA SUMMARY:
- A total of 396 people completed a cardiovascular risk assessment.
- 244 were male (61.6%) 152 were female (38.4%)
- 191 were Maori (48.2%) 185 were non-Maori (46.7%) 20 were PI (5%)
- 12 (3%) were <35yrs, 69 (17.4%) were 35-44yr, 143 (36.1%) were 45-54, 98 (24.7%) were 55-64yrs, 74 (18.6%) were >65yrs.
- Of the total 396 screened 81 (20.4 %) were assessed as having a CV risk >15% and were either i) given active telephone management for the 12 months following or ii) referred to CarePlus or iii) were given lifestyle management on site by the registered nurses.
- Of the 81 people assessed with CV risk >15%
  - 55 were male (68%)
  - 26 were female (32%)
  - 49 were Maori (60%) 25 were non-Maori (31%) 7 were PI (9%)
  - 1 was < 35years
  - 7 were 35-44
  - 28 were 45-54
  - 16 were 55-64
  - 29 were >65
• Of the 61 people in general practice who were assessed >15% CV risk at the beginning of the pilot 55 (90%) were re-assessed after 12 months.
  • 14 (25.5%) had lowered their risk;
  • 18 (33%) remained the same;
  • 7 (12.7%) had increased their risk
  • 16 (29%) were assessed as clinically high.

• The average time taken for the risk assessment was 45 minutes.
• In general practice the response rate to the mail-out inviting eligible patients to participate in the project was 30%.
• All assessments were undertaken within normal practice / work hours with the exception of one community site where the CV screens were done after normal work hours.

The CVD pilot met the set objectives (p.8) and reached the target groups of Maori/ Pacific (48.2%), men (61.6%) with 63% of the total people screened aged between 35-54 years. The first year of the pilot included five general practice sites and two industry sites. The second year of the pilot included two community sites which enabled a more targeted approach to reach Maori and Pacific men.

Most of the 81 people assessed as having CV risk >15% received active monitoring / management over the following year. The people assessed within the general practice and industry sites received support from a registered nurse for the 12 months following the initial assessment. People assessed with CV risk >15% within the community sites were referred to their GPs for enrollment on to CarePlus.

Of the 81 assessed with >15% risk 56 were risk assessed after one year.

The age for screening was high in general practice (average +) and low in the industry and community sites.

General practice has a seamless pathway of care onto the CarePlus programme for people who are screened and assessed with high risk

It is harder to provide on-going management for people in industry and community site who are assessed with high risk
APPENDIX I
Sample invitation letter

Dear ..................................................

As you are probably aware heart disease is a big problem for many New Zealanders. Many people get sick or die from heart disease, which in many cases can be prevented.

Some groups of people are more likely to develop heart problems than others. Unfortunately, Northland has one of the highest rates of heart disease in New Zealand.

The team at ************* want to do something about this and invites you to visit us for

A FREE heart health check

This will also be an opportunity to talk about ways we can work together to lessen the chance of heart problems occurring.

I have enclosed a pamphlet which further explains what the free check is all about. It would be great if you could read this, and if you have any questions for you to give me a call.

Also enclosed is a form for a free fasting blood test. You can have the fasting blood test done between........................., Monday to Friday at..........................

Remember, don’t eat or drink anything before you have the blood test!

Looking forward to hearing from you soon to make an appointment for your free heart health check.

Kind regards
Practice Nurse

Medical Centre
APPENDIX II
Patient Pamphlet

You are invited to come for a FREE HEART HEALTH CHECK

Any questions?
To find out more please give your Practice Nurse a call
Kia orā!

What is heart disease?
When the heart tubes are blocked or too narrow causing
• Heart attacks
• Strokes
• Angina (chest pain)

Heart disease is the leading cause of death in Northland. Many people die too young from problems that can be prevented. Some groups of people are more prone to heart disease than others.

Things that are known to help prevent heart disease

Living an active life with a good balance of exercise & relaxation

Eating healthy food that is low in fat & salt

Being smoke-free

Having a health check to identify problems

How can we work together to prevent HEART DISEASE “Mate Ngakau”

The good news is...

By having a FREE HEART HEALTH CHECK

You can find out what your risk is for developing heart disease and make a plan to lessen the chance of it happening! Kapai!

What needs to happen?

♥ You will need to have a blood test first thing in the morning before you eat anything. The test is free and I have enclosed a form for this.

♥ A few days later, when your blood results are back, we can meet together to do your FREE HEART HEALTH CHECK. This will take no longer than 40 minutes.

♥ We will have a chat about what your risk of developing heart disease is, and if necessary plan some actions.

♥ If you need medicine to help prevent heart problems you will need to see the doctor and the usual fee will apply.
APPENDIX III

INDUSTRY SITE: SAMPLE LETTER TO GP (1)

<table>
<thead>
<tr>
<th>Dear (GP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>As you are aware .................(company) is participating in the CVD risk assessment and management pilot programme which is being funded and managed by Manaia Health PHO. Currently we are focusing on two industrial sites.</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>This letter is to inform you that we have recently undertaken a CVD risk assessment using the PREDICT electronic decision-support tool, on the following person who is registered with your practice.</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Name:</td>
</tr>
<tr>
<td>NHI Number:</td>
</tr>
<tr>
<td>CVD risk assessment score:</td>
</tr>
<tr>
<td>As the CVD risk is less than 15%, the Occupational Health Nurse has provided specific individualized lifestyle advice (for CVD risk 10 to 15%), or general lifestyle advice (for less than 10%), on a cardio-protective dietary pattern, physical activity and smoking cessation as appropriate. (Person's name) has been informed that you will receive this letter.</td>
</tr>
<tr>
<td>Yours sincerely</td>
</tr>
<tr>
<td>Occupational health Nurse</td>
</tr>
<tr>
<td>Name of Industry Site</td>
</tr>
</tbody>
</table>

SAMPLE LETTER TO GP (2)

<table>
<thead>
<tr>
<th>Dear (GP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>As you are aware .................(company) is participating in the CVD risk assessment and management pilot programme which is being funded and managed by Manaia Health PHO. Currently we are focusing on two industrial sites.</td>
</tr>
<tr>
<td></td>
</tr>
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<td>This letter is to inform you that we have recently undertaken a CVD risk assessment using the PREDICT electronic decision-support tool, on the following person who is registered with your practice.</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Name:</td>
</tr>
<tr>
<td>NHI Number:</td>
</tr>
<tr>
<td>CVD risk assessment score:</td>
</tr>
<tr>
<td>As the CVD risk is 15% or greater, we have strongly advised (person's name) to make an appointment to see their GP as drug therapy may be indicated. The Occupational Health Nurse will be providing specific individualised lifestyle advice on a cardio protective dietary pattern, physical activity and smoking cessation as appropriate. She will also maintain regular contact with (person's name) to encourage and support lifestyle changes. As part of the pilot programme, the Occupational Health Nurse will undertake a repeat cardiovascular risk assessment at one year. (Person's name) has been informed that you will receive this letter.</td>
</tr>
<tr>
<td>Yours sincerely</td>
</tr>
<tr>
<td>Occupational health Nurse</td>
</tr>
<tr>
<td>Name of Industry Site</td>
</tr>
</tbody>
</table>
APPENDIX IV

TABLE OF CONTENTS FOR RESOURCE KIT

SECTION 1 – REFERENCE FLOWCHARTS
- CVD risk assessment and management process – Manaia Health PHO ~ this outlines the process for the pilot and is based on the steps outlined in the NZGG publication, The Assessment and Management of Cardiovascular Risk
- Intervention according to cardiovascular risk assessment – New Zealand Guidelines Group, 2003

SECTION 2 – GENERAL INFORMATION:
- The Assessment and Management of Cardiovascular Risk – New Zealand Guidelines Group, 2003

SECTION 3 – ‘PREDICT’ Users Guide

SECTION 4 – SMOKING RESOURCES
- Relapse Matahoki – The Quit Group, 2004
- Smoking (leaflet) Heart Foundation of New Zealand, 2005
- Smoking cessation information resource – includes information regarding Quitline and Quitcard providers in Whangarei

SECTION 5 – NUTRITION RESOURCES
- Nga Rourou Kai e Toru : Choosing healthy kai can be easy – Te Hotu Manawa Maori
- Nga Miti – He Kai Reka – Te Hotu Manawa Maori
- Heart Healthy Dietary Pattern – Heart Foundation of New Zealand, 2005
- Weight Management – Heart Foundation of New Zealand, 2005
- Manaia Health PHO Primary Health Care Dietitian – Process and Referral Form

SECTION 6 – PHYSICAL ACTIVITY RESOURCES
- Whaia te manawa ora – Te Hotu Manawa Maori
- Physical Activity – National Heart Foundation of New Zealand, 2005.
- Green Prescription Activity Providers, Whangarei
- Local activity groups
- Whangarei and area walking tracks. 10,000 steps

SECTION 7 – GENERAL RESOURCES
- Blood Pressure – National Heart Foundation of New Zealand, 2005.
APPENDIX V
Patient questionnaire

FREE HEART HEALTH CHECK

Kia ora / greetings.
Recently I met with you for your Heart Health Check at the …………… Medical Centre. As this is a new approach to keeping people well we would be very grateful if you would take a few minutes to fill out the following feed-back form. Your comments will enable us to assess the service and, if necessary, make improvements for other people. This is confidential and can not be traced to you so please be as honest as you like!
Once completed please return in the enclosed free-post envelope.

Kind regards, ……………… (Practice nurse)

1. What was the most important thing you learned from having the Heart Health Check?

________________________________________________________________________

2. What changes have you made since having your Heart Health Check?

_____________________________________________________________________

3. What were the most useful parts of the Heart Health Check? (please tick)

   □ knowing my risk score (percentage)
   □ increasing my understanding about my health
   □ having time to discuss my Heart Health with the nurse
   □ receiving written information about Heart Health

________________________________________________________________________

4. Have you recommended having a Heart Health Check to any other people? (please tick)

   □ Yes
   □ No

   If you answered yes who have you recommended this to?

________________________________________________________________________

5. Have you any ideas/suggestions for encouraging more people to have a free Heart Health Check?

________________________________________________________________________

Many thanks for your time filling out this feedback form. Please return in the enclosed free-post envelope to:
Manaia Health PHO
Po Box 1878 Whangarei