Improving Māori Access to Cardiovascular Health Care: Literature review

Prepared for the Ministry of Health, 2014
Prepared by Fiona Cram, for Katoa Ltd

1. Leadership
2. Knowledge
3. Commitment
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He mihi mahana ki a koutou.

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Glossary of Māori Terms

Aotearoa: New Zealand, we acknowledge that this often is used to refer to the North Island only with the South Island known as Te Waipounamu

Iwi: tribe

Māori: ordinary, normal; Indigenous peoples of Aotearoa

Whānau: extended family

Abbreviations

BP: blood pressure
CVD: cardiovascular disease
D2B: door-to-balloon
DBP: diastolic blood pressure
DHB: District Health Board
FRE: Framingham Risk Equation
GP: general practitioner
HbA1c: glycated haemoglobin
LDL-C: low-density-lipoprotein cholesterol
SBP: systolic blood pressure
STEMI: ST segment elevation myocardial infarction
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I Executive Summary

According to the World Health Organization, ‘in both poor and industrialised countries in which they live, the health status of indigenous peoples is invariably lower than that of the overall population’ (World Health Organization 2011). In Aotearoa New Zealand the unequal health outcomes experienced by Māori have been documented in a number of academic and government documents (Ministry of Health 2010; Robson, B & Harris, R (Eds.) 2007). The focus of the present research was the contribution that health services can make to the reduction of Māori health inequalities through ensuring equity of access to health care (Ministry of Health 2002). The aim of this project was to answer the question, How can access to health services be improved for Māori? The focus of the project was on diabetes, cardiovascular disease (reported here), and cancer, and had three objectives.

• Increase the health sector’s understanding of the issues affecting Māori access to health services.
• Provide an evidence base for action to improve access to health services for Māori.
• Provide solutions to improve access to health services for Māori.

Background

The general term cardiovascular disease is used to describe diseases of the heart and blood vessels, including ischaemic heart disease, stroke and heart failure (Curtis et al 2007). Overall, Māori are more than twice as likely as non-Māori to hospitalised, and two-and-a-half times as likely to die from cardiovascular disease (Ministry of Health 2010). A large proportion of these deaths are preventable (Ministry of Health 2007). In 2004 Bramley and colleagues (2004: 1) described the progress made in the reduction of these disparities as ‘alarmingly slow’ considering that they had been documented for many years. In 2012 Ellis, Pryce, MacLeod and Gamble (2012) also concluded that comprehensive strategies were still needed to eliminate cardiovascular disease health disparities.

The ways in which Māori are disadvantaged in their access to cardiovascular disease health care are likely to be multiple, and occur across the continuum of health care. Hotu and colleagues (2010) describe barriers for patients and whānau related to the costs associated with accessing care (e.g., transportation, medication, and lost employment time), as well as those related to low health literacy. Physician-related barriers include limited time and cultural misunderstandings (Hotu et al 2010; Brown et al 2010). A key barrier was addressed when the age to start cardiovascular disease risk assessments was set at 35 years for Māori, Pacific and Indo-Asian peoples (compared to 45 years for Pākehā New Zealanders).

Method

The review examined the recent (post-2006) literature on interventions to improve access to diabetes health care for Māori, Indigenous peoples, and ethnic minority (largely Hispanic American and African American) groups. These interventions were profiled across the continuum of care.

Findings

Hypertension among ethnic minority populations has been shown in several large studies to be amenable to effective and sustainable change (lowering) through culturally responsive health care that uses system level (access to care) as well as personal (behavioural and pharmacological) strategies.

Culturally and linguistically tailored behavioural interventions, delivered by multidisciplinary teams that include community health workers are effective. The leadership of nurses within these and other initiatives is also acknowledged in the literature.

Health practitioners can improve access through the application of clinical guidelines and advice. An ‘electronic backbone’ can support health practitioners in this.

Health organisations can improve access by building their capacity to deliver culturally tailored health care to Māori patients. This includes the collection of accurate patient ethnicity data.

Regulatory reforms and policy drivers can also be exerted by the health system to ensure, for example, the collection of accurate ethnicity data, the development of local-level plans and initiatives, and engagement with Māori leaders and communities.
## Table 1. Intervention strategies to reduce cardiovascular health care disparities

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Description</th>
<th>Cardiovascular Care Interventions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Facilitate patients’ health literacy and ability to self-manage CVD</strong></td>
<td>Initiatives improve the health literacy, understanding of interventions, and self-management ability and motivations of patients with CVD. This includes the provision of information and reminders.</td>
<td>Culturally tailored diet, nutrition and exercise programmes Mediation for the management of blood pressure Self-help groups Home-based tools: • Blood pressure monitor • Web-based assessment</td>
</tr>
<tr>
<td><strong>Engage community health workers to work closely with patients</strong></td>
<td>Community-based health workers (including promotoras, community nurses) assist patients with education, self-management, and access to health services by being a bridge between the community and health clinic.</td>
<td>Community health workers supporting care through: • Patient coaching • Home visiting Nurse-led interventions that involve community personnel</td>
</tr>
<tr>
<td><strong>Build a culturally competent health workforce</strong></td>
<td>Health practitioners are supported to deliver culturally competent clinical care (including the use of reminders and protocols, as well as professional development).</td>
<td>Community-based participatory experiences for students in health education programmes Communication training to support trusting and effective relationships, including participatory (with patient) decision-making On-going workforce support, including the provision of clinical decision guidelines and other uncertainty reduction tools Working in multidisciplinary teams</td>
</tr>
<tr>
<td><strong>Reorganise health clinics to improve accessibility</strong></td>
<td>Changes are implemented to the way clinics organise and provide services.</td>
<td><strong>Community engagement</strong> Community involvement in planning, development of health care models, and delivery of health care Accountability to communities Clinics located within communities, or practice staff visits in the community Culturally appropriate clinic waiting room Recruitment and training of local people, including making space for volunteers <strong>Quality improvement</strong> Commitment to comprehensive quality improvement, including allocation of resources for quality improvement and reduction of disparities Collection of accurate patient ethnicity data (and training of staff to do so) Use data and performance measures to inform solutions Monitoring, evaluation and reporting of outcomes Use of IT tools to ensure patients receive evidence-based medicine <strong>Models of care</strong> Community-oriented and culturally responsive models of care, including: • Traditional methodologies (e.g., spiritual treatments) • Patient-centred care • Behavioural and pharmacological care strategies • Indigenous health practitioner workforce • Team-based care Pathways from primary to secondary care and to specialist care</td>
</tr>
</tbody>
</table>
Improving Māori Access to Cardiovascular Health Care: Literature review

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Description</th>
<th>Cardiovascular Care Interventions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health system</td>
<td>The health system can respond through funding formulas and strategies that reduce the barriers imposed by patient financial resource limitations.</td>
<td>Hospital regulatory reforms, including:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Minimal procedure volume standards for angiography</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Requirement for health organisations to prepare annual ‘community outreach, access and prevention’ plans</td>
</tr>
</tbody>
</table>

Source. Inspired by Chin et al (2012: 996 Table 3)

The broad intervention strategies shown to improve access to cardiovascular health care for people in one or more of these groups are summarised in Table 1.

In summary, this review of interventions to reduce cardiovascular health care disparities has highlighted the importance of interventions at different levels, including community outreach, clinic reorganisation (including investing in a culturally responsive workforce and the implementation of evidence-based guidelines and tools), medication, and the development of health system strategic and policy drivers.
2 Background

According to the World Health Organization (WHO), ‘in both poor and industrialised countries in which they live, the health status of indigenous peoples is invariably lower than that of the overall population’ (World Health Organization 2011). In Aotearoa New Zealand the unequal health outcomes experienced by Māori have been documented in a number of academic and government documents (Ministry of Health 2010; Robson, B & Harris, R (Eds.) 2007).

In 1995 Benzeval, Judge and Whitehead proposed a framework for tackling socioeconomic inequalities in health. This framework stressed the importance of changing behavioural risk factors by reducing the barriers to people adopting healthy lifestyles, improving the physical environment and addressing social and economic factors, and improving people’s access to effective health services. The Ministry of Health’s (2002) Intervention Framework to Improve Health and Reduce Inequalities also called for comprehensive strategies to:

- address the structural causes of inequalities
- mediate the effect of socioeconomic position on health, and of poor health on socio-economic position
- reduce health service barriers to equitable access to effective health care.

In their 2008 report, ‘Closing the Gap in a Generation’, the WHO Commission on the Social Determinants of Health placed the health-care system within this broader context as a way of understanding the multiple aspects of people’s lived reality that impact upon their health and wellness (CSDH, 2008). Being treated equitably and fairly in the many aspects of this broader context is part of people’s right to health; that is, the ‘…entitlement to a system of health protection, including health care and the underlying determinants of health, which provides equality of opportunity for people to enjoy the highest attainable level of health’ (Hunt and Bueno De Mesquita 2007: 7).

There is now international recognition that social and economic determinants play a large part in health inequalities (CSDH 2008). Access to health services needs to also be considered within a determinants framework. This will take into account the factors that facilitate or compromise the ability of Māori to make it to the door of a health service (i.e., ‘access to’ health care), and then journey safely within that service (i.e., ‘access through’ health care) (Ellison-Loschman and Pearce 2006: 614).

The focus of the present research was the contribution that health services can make to the reduction of Māori health inequalities through ensuring equity of access to health care (Ministry of Health 2002: 21). Since the 1970s authors have noted the difficulties in, and debate about, how ‘access’ or ‘equitable access’ to health care is defined. Goddard and Smith (2001), for example, note that a focus on equity of access is only responsive to the issue of supply, with demand being overlooked even though the preferences, perceptions and barriers experienced by patients are an important aspect of access. The New Zealand Human Rights Commission uses the ‘interrelated and essential elements’ outlined in ICESCR General Comment 14 (United Nations 2000) to assess the promotion and protection of the right to health. These are:

**Availability** envisages a sufficient number of functioning public health services, facilities and programmes being available.

**Accessibility** means that the services and facilities are available to everyone without discrimination. They also have to be physically accessible and affordable, and people should be aware of their existence.

**Acceptability** means that the services must respect medical ethics, be culturally appropriate and respect confidentiality.

**Quality** means that health services must be scientifically and medically appropriate, and of good quality (Human Rights Commission 2004).

While ‘accessibility’ is defined here as one component of the right to health it is proposed that ‘access’ to health services encompasses all four of the above components.

The aim of this project was to answer the question: How can access to health services be improved for Māori? The project focused on cardiovascular disease, diabetes and cancer, and had three objectives.

- Increase the health sector’s understanding of the issues affecting Māori access to health services.
- Provide an evidence base for action to improve access to health services for Māori.
- Provide solutions to improve access to health services for Māori.
3 Introduction

The general term cardiovascular disease (CVD) is used to describe diseases of the heart and blood vessels, including ischaemic heart disease, stroke and heart failure (Curtis et al 2007). Overall, Māori are more than twice as likely as non-Māori to hospitalised, and two-and-a-half times as likely to die from CVD (Ministry of Health 2010). A large proportion of these deaths are preventable (Ministry of Health 2007). In 2004 Bramley and colleagues (2004: 1) described the progress made in the reduction of these disparities as ‘alarmingly slow’ considering they have been documented for many years. In 2012 Ellis, Pyce, MacLeod and Gamble (2012) also concluded that comprehensive strategies were still needed to eliminate CVD health disparities.

This introduction examines current approaches to health care access improvement and disparity reduction for CVD. The barriers that exist for Māori accessing cardiovascular health care are then canvassed. This is followed by a review and then discussion of interventions to improve access to CVD health care for Māori and other Indigenous and minority ethnic group peoples.

3.1 Current Approaches to Reducing CVD Disparities

The New Zealand Health Strategy priorities identified by Professor Jim Mann in the foreword to the 2007 Diabetes and Cardiovascular Disease Quality Improvement Plan are ‘reducing diabetes and CVD in our population as a whole and reducing health status inequalities between ethnic groups and among regions’ (Ministry of Health 2007: iii).

The best practice guidelines on CVD, Assessment and Management of Cardiovascular Risk, published by the Guidelines Group (New Zealand Guidelines Group 2003) ‘provide evidence-based recommendations for the management of people at high risk of CVD and those with clinically manifest disease’ (Ministry of Health 2007: 3). These guidelines complement population-based strategies to reduce risk factors, as well as the 2007 Quality Improvement Plan. The Quality Improvement Plan states that ‘[s]ystematic implementation of the…Guidelines through primary care can provide considerable benefits to many ‘at risk’ people in a relatively short period’ (Ministry of Health 2007: 8). The Ministry’s (2007) indicators of quality improvement for CVD are replicated in Table 2. There is a close link between the quality and equality of health care, and Table 2 outlines what CVD patients should be receiving, as well as indicators of system responsiveness, along the continuum of care from primary prevention to the treatment of acute coronary symptoms.

The New Zealand Guidelines Group has published pamphlets on CVD topics for patients, their families/whānau, and friends that are based on evidence-based guidelines. For example, their pamphlet on Atrial Fibrillation describes the function of the heart as the context for introducing atrial fibrillation, its causes, symptoms, and the patient tests that are required. The risk and prevention of stroke is highlighted, along with the role of medication (warfarin) (New Zealand Guidelines Group 2006).

In 2009 the National Cardiac Surgery Clinical Network was established and tasked with implementing the 2008 Cardiac Surgery Services Development Working Group Report (Hamer and Kerr 2012).

_The Network’s overall goal is to reform, improve and strengthen health care around cardiac surgical systems across New Zealand. This will be achieved through increasing the number of funded cardiac surgeries performed, prioritising people with the greatest need and improvement in the quality and productivity of services (National Health Board 2012)._

The Network’s goals are to:

- increase delivery of publicly-funded cardiac surgery
- improve equity of access to cardiac surgery
- improve the quality of service of cardiac surgery
- ensure the development of appropriate systems and processes to support these goals
- support district health boards, health professionals and the Ministry of Health to enhance the provision of publicly funded cardiac surgery in New Zealand (National Health Board 2012).

The Network’s first initiative was the development of registries for cardiac surgery, acute coronary syndrome and interventional cardiology and the linking of these registries to pharmaceutical and national outcome datasets. This will enable more intensive research to understand variations in care across the continuum of care, including pre-hospital, in-hospital and post-discharge (Hamer and Kerr 2012). This is in line with the second action area of the Māori Cardiovascular Action Plan; namely, improved information systems (see below). It is reported that two years
Table 2. Indicators of quality improvement for CVD

<table>
<thead>
<tr>
<th>Setting</th>
<th>Priority area</th>
<th>Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary prevention</td>
<td>Risk assessment</td>
<td>Percentage of people who have had five-year CVD risk assessment (any person who has had any previous CVD event is at high risk and requires intensive management)</td>
</tr>
<tr>
<td></td>
<td>Risk management</td>
<td>Percentage of people identified at risk receiving appropriate management according to established guidelines (effective management requires resources for practice management systems, staff training, and access to counselling and support services)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Measurement measures:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Smoking cessation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Green Prescription</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Dietary advice</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Statin uptake for patients with CVD risk &gt;15% • aspirin uptake for patients with CVD</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Warfarin use in high stroke-risk AF</td>
</tr>
<tr>
<td>Treatment of acute coronary symptoms</td>
<td>Patient delay</td>
<td>Time (hrs.) from symptom onset to first medical consult</td>
</tr>
<tr>
<td></td>
<td>Treatment delay</td>
<td>Time (hrs.) from arrival at hospital until start of thrombolysis or PCI</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Percentage of eligible patients given thrombolysis or direct PCI</td>
</tr>
<tr>
<td></td>
<td>Clinical assessment</td>
<td>Classification of MI (ST or non-ST), UA For all MI patients, assessment before discharge of:</td>
</tr>
<tr>
<td></td>
<td>and risk stratification</td>
<td>• Left ventricular function</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Stress testing</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Coronary angiography</td>
</tr>
<tr>
<td></td>
<td>Revascularisation</td>
<td>Percentage of patients receiving PCI before discharge from admitting or receiving hospital</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Percentage of patients receiving coronary bypass surgery before discharge from admitting or receiving hospital</td>
</tr>
<tr>
<td></td>
<td>Discharge medications</td>
<td>• Aspirin</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Statin</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Beta blocker</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• ACE inhibitor</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Clopidogrel</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• NRT or other smoking cessation aid</td>
</tr>
<tr>
<td></td>
<td>Rehabilitation</td>
<td>• Referral</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Attendance</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Completion</td>
</tr>
</tbody>
</table>

Note. Bold text indicates priority areas for initial attention. AF = atrial fibrillation; MI = myocardial infarction; NRT = nicotine replacement therapy; PCI = percutaneous coronary intervention; UA = unstable angina

Source. Ministry of Health (2007: 7 Table 1)

after the Network's formation ‘we now have public cardiac surgery services to be proud of, and we can be confident that those in need are able to access them’ (Ministry of Health 2011b: 3 Foreward by Andrew Hamer).

In 2011 the Ministry of Health’s Briefing to the Incoming Minister of Health (2011a: vi) acknowledged the ‘substantial differences in health outcomes’ for Māori, alongside the increasing burden of long-term health conditions such as cancer and CVD on New Zealand’s ageing population (Ministry of Health 2013). The BIM also spoke to the need to prioritise proven ‘upstream’ preventative and early interventions (especially for non-communicable diseases), invest in better models of care and integrated services, and improve the performance of the health system. Key to the reduction of Māori disparities is the recognition of the importance of the health system’s responsiveness to the ‘diversity of needs within the population’, particularly Māori and Pacific peoples (Ministry of Health 2011a: vii).

The NZ Guidelines Group: New Zealand Primary Care Handbook 2012 includes cardiovascular risk assessment and diabetes screening, and cardiovascular risk factor management. Following the Guidelines Group recommendation the age to start CVD risk assessments is now 10 years younger (i.e., 35 years) for Māori, Pacific and Indo-Asian peoples than for European New Zealanders (i.e., 45 years). In 2011/12 the Ministry required each DHB to produce a Māori health plan addressing nine national health issues. Cardiovascular disease was included as one of the nine national health priorities that DHBs were required to include in their Māori health plan (along with diabetes). The CVD indicators were (1) Percentage of the eligible population who have had their CVD risk assessed within the past five years, and (2) Number of tertiary cardiac interventions (no target, information only), The Ministry’s latest SoI also includes ‘More heart and diabetes checks’ as one of six health targets for 2013-2016 (Ministry of Health 2013: 12).
90% of the eligible population will have had their cardiovascular risk assessed in the last five years. DHBs are required to achieve at least 75% by 1 July 2013, and DHBs exceeding 75% are expected to be actively moving toward the 90% goal (Ministry of Health 2013: 12).

The National Heart Foundation and the University of Auckland have recently developed a web-based assessment tool to enable people to take control of their own health. ‘The Heart Age Forecast (found at www.knowyournumbers.co.nz) is the first of its kind and will calculate a person’s current and future risk of heart disease or stroke, providing them with a tailored heart health plan to put them on a path to a healthier lifestyle’ (Ministry of Health, National Health Board 2011: 11).

3.2 Barriers to Access

Hotu and colleagues (2010: 3265) write that

‘...there are costs associated with chronic disease management including the cost of medication, transport and time lost from employment to attend clinic follow-up. Māori and Pacific people are more likely to have a lower family income with higher demands related to the support of extended families. These factors combined with lower levels of education for many and language barriers, particularly for Pacific people, constitute barriers to effective health care. Physician-related barriers also exist in the treatment of hypertension and include limited time for patient education and communication, cultural misunderstanding, language barriers, infrequent follow-up and acceptance of suboptimal achievement of goal [blood pressure].

Brown (2010: 326) summarised a variety of access and quality of care issues that impact on the cardiovascular health of Aboriginal Australians. These include: emergency department delays; lower rates for receipt of thrombolysis, nitrate therapy, heparin and lipid lowering drugs; access to specialist services and cardiac procedures; receipt of cardiovascular therapies; and access to cardiac rehabilitation services. Brown and colleagues (2010) also identified barriers to equitable access for Indigenous Australian cardiovascular patients to revascularisation interventions. These are aligned to the capacity levels identified by LaFond, Brown and Macintyre (2002) in Table 3. Some of these are amenable to educational interventions (e.g., cross-cultural training), whereas others require more long-term fixes (e.g., building inter-relationships among providers).

Table 3. Factors affecting Indigenous Australian cardiovascular patients access to revascularisation interventions, by capacity levels

<table>
<thead>
<tr>
<th>Capacity Level</th>
<th>Factors affecting access to revascularisation interventions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual/Community</td>
<td>• Longer response time to acute symptoms as a result of poor awareness and education, confusion as to reasons for chest pain</td>
</tr>
<tr>
<td></td>
<td>• Lower rates of consent for revascularisation (patient choice¹)</td>
</tr>
<tr>
<td></td>
<td>• Wider community infrastructure (including transportation).</td>
</tr>
<tr>
<td>Human resources</td>
<td>• The way in which health professionals respond to presentations by Indigenous patients</td>
</tr>
<tr>
<td></td>
<td>• The level of education and cross-cultural and cardiovascular training of health professionals</td>
</tr>
<tr>
<td></td>
<td>• The level of understanding among medical and nursing staff of the available evidence (e.g. diagnosis, treatment options)</td>
</tr>
<tr>
<td></td>
<td>• The adequacy of staffing numbers and skills-base</td>
</tr>
<tr>
<td>Health organisation</td>
<td>• Case complexity—the higher rates of co-morbidity may influence treatment choices by providers.</td>
</tr>
<tr>
<td></td>
<td>• Inadequate risk stratification to better identify individuals who would benefit from invasive management.</td>
</tr>
<tr>
<td></td>
<td>• The difficulty in disseminating and implementing new knowledge (e.g. guidelines).</td>
</tr>
<tr>
<td>Health system</td>
<td>• Inter-relationships between different providers (within a department, between departments, between different health sites or sectors).</td>
</tr>
<tr>
<td></td>
<td>• The distribution of hospital resources (where they are, what infrastructure they house, how they are run and managed and the local capacity to deliver cardiovascular services)</td>
</tr>
<tr>
<td></td>
<td>• The availability of pathology and other diagnostic facilities</td>
</tr>
<tr>
<td></td>
<td>• Medical transportation (for acute events as well as to tertiary services)</td>
</tr>
</tbody>
</table>

Source. Adapted from Brown et al. (2010: 302).
Note. ¹ While this is labelled here as ‘patient choice’, the role of health professionals and health organisations in patients’ health literacy is also acknowledged.
Jeremy and colleagues (2010) summarised the important initiatives described by expert speakers at the 2010 Cardiac Society Inaugural Cardiovascular Health Conference.

- Health care delivery models need to be developed collaboratively with communities to take into account their specific needs, values and beliefs. This will enable more responsive models that strive for a sustainable interface between Western and traditional concepts, through a process that builds trust, as well as a sense of community ownership and enfranchisement.
- Meaningful improvements in access to health care will not occur until fundamental barriers to access are addressed; namely barriers arising out of cultural misunderstandings, socioeconomic disadvantage, and the disenfranchisement of Indigenous people.
- Potential barriers within the health system also need to be addressed so that even the most well-designed system is accessible; for example, workforce limitations, lack of relevant infrastructure, difficulty of navigation, and non-sustainable access to medicines.
- Access is improved where there is full access to necessary medications, workforce training for culturally responsive care, on-going professional workforce support including the provision of clinical decision guidelines, pathways from primary to secondary care and to specialist care, community delivery of care, and the monitoring and reporting of outcomes.

In 2004 the Māori Cardiovascular Group developed the Māori Cardiovascular Action Plan. The overall aim of the plan is to ‘improve Māori cardiovascular health and to remove inequalities in cardiovascular disease outcomes between Māori and non-Māori’ (Bramley et al 2004: 3). The Plan contains six action areas that provide a multi-level, multi-sector strategy for achieving this aim.

1. Policy development – recognition of the Treaty of Waitangi and the active engagement of Māori in policy development are prioritised in the Plan.

2. Improved information systems – complete and consistent ethnicity data is needed to monitor health status and disparities. This can be achieved through a standardised ethnicity question and regular audits of ethnicity data collected by health providers. Brown (2010: 325) describes the comprehensive and sustained collection of prospective data collection as an essential complement to the system reform needed to reduce Indigenous CVD disparities and improve outcomes.

3. Needs assessment – cardiovascular health needs assessments will identify unmet need within communities and barriers to accessing equitable care, including preventive services (e.g., promotion of healthy environments).


5. Māori workforce development – the auditing of the Māori cardiovascular health workforce, followed by on-going recruitment and training of Māori. Service-wide recognition of the Treaty, along with training and resources for non-Māori staff are also recommended.

6. A proposed research agenda – Kaupapa Māori research will enable a self-determined Māori cardiovascular health research and follow-on health service response.

3.3 Summary

The Ministry of Health’s Diabetes and CVD quality improvement plan (Ministry of Health 2007: iii Foreword by J Mann) stated that ‘there is evidence that the long-recognised inequalities in care are reducing’ and advocated for a continuous improvement cycle across the diabetes and CVD continuum of care that ‘straddles public health, primary care and other care settings’. However New Zealand and Australian Indigenous health researchers argue that while much attention has been paid to reducing Indigenous disparities in CVD risk factors, less attention has been paid to the role of health care quality and health system performance as potential causes of unequal outcomes for Indigenous peoples (Brown 2010). ‘Although many of the determinants of health lie outside of the realm of the health sector, the sector has a key role in ensuring that access to procedures is equitable and that healthcare responsiveness is based on demonstrable need’ (Bramley et al 2004: 1). The greater burden of CVD morbidity and premature mortality carried by Māori cannot be explained solely by risk factor variation. As in other communities of colour, differentials in access to, and care in hospitals and rehabilitation services play an important role (Davis et al 2007). It is therefore timely to examine how to improve Māori access to CVD health care.
4 Improving Access to Cardiovascular Services

The main focus of this review was on improving access to care during screening, diagnosis, treatment and care (Newman et al. 2008) (see Appendix A for review method). The present review therefore looked at phases 2 through 4 of the cardiovascular continuum of care.

1. Prevention
2. Screening/early detection and management
3. Intensive assessment, effective diagnosis, and treatment
4. Rehabilitation and support services, including quality of life and survivorship, and palliative and end of life care

This review does not address the modification of some individual risk factors related to the primary prevention of CVD; namely, smoking, dietary pattern, physical activity, and body mass index (Stuart-Shor et al. 2012). This is not to understate the importance of addressing individual risk factors such as Māori rates of smoking, inactivity, and obesity (Ministry of Health 2007) (also see Appendix B).

Davis and colleagues (2007) reviewed evaluation studies of interventions to improve CVD care (including reduction of risk factors), from 1995 to 2006. When relevant, a brief summary of Davis et al.’s (2007) review findings is presented at the beginning of the sections below. The findings from other reviews and syntheses are then presented, followed by other intervention findings.

4.1 Screening/Early Detection and Management

4.1.1 Patient and/or Clinician Interventions

Nine of the 27 intervention studies identified by Davis and colleagues in their 2007 review were of non-pharmaceutical interventions (salt restriction, diet, exercise, and/or stress reduction) with patients or families, designed to reduce hypertension. Benefits were only seen from sodium restriction, at least in conjunction with the study diets, and especially for African American patients. Davis et al. (2007) reviewed nine interventions in lipids. Three of the four patient focused interventions led to no or little improvement, and cardiovascular nutrition instruction led to some (non-significant) improvement in cholesterol.

Stuart-Shor, Berra, Kamau and Kumanyika (2012) reviewed behavioural strategies to reduce cardiovascular risk in diverse and underserved racial/ethnic groups. They write that ‘several large hypertension trials [published between 1988 and 2005] have demonstrated that culturally tailored care that uses both systems (access to care) and individual strategies (behavioural and pharmacological) can effectively lower BP among members of racial/ethnic minority populations and that these changes can be sustained over time’ (Stuart-Shor et al. 2012: 177). They note that many researchers suggest community-based participatory research as a way of involving communities in the development and implementation of interventions. Stuart-Shor et al. (2012: 178) also note Davis et al.’s (2007) review, and add that behavioural ‘interventions that target the provider and healthcare organization have also been shown to improve lipid profiles in racial/ethnic and underserved populations’.

Seven of the individual intervention studies included in this review explored patient and/or clinician interventions (see Table 4). Two interventions worked directly with Native Hawaiians to reduce blood pressure (BP) through Transcendental Mediation (Toomey 2007) and Ho‘oponopono, a spiritual intervention designed to relieve stress (Kretzer et al. 2007). Kretzer et al. (2007) reported that participants’ systolic blood pressure (SBP) and diastolic blood pressure (DBP) decreased after the intervention (by an average of 11.86 mm Hg and 5.44 mm Hg respectively, no control group), and their spirituality scores increased significantly. Toomey (2007) reported a marginally significant reduction in carotid intima-media thickness in the high cholesterol Transcendental Mediation group (compared to health education group), and a significant reduction in depression for the Transcendental Mediation group as a whole. Within the Transcendental Mediation group there was a significant pre- to post-intervention reduction in DBP and SBP that was not seen within the health education control group.

Five interventions involved mainly African American populations with uncontrolled hypertension. These patients are described as clinically complex (Turner et al. 2012). Two interventions involved patient coaching by community health workers (Cooper et al. 2011) or trained peer patients (Turner et al. 2012). Cooper and colleagues (2011) found that the combination of patient coaching by community health workers, and communication skills training for primary care physicians in community care practices led to significant improvements in patients’ reports of their physicians’ participatory decision-making, patient involvement in care, and information exchange. Non-significant reductions in SBP were observed among patients with uncontrolled hypertension in all three intervention groups (patient+physician intensive, physician intensive alone, patient intensive alone), compared to the minimal
Table 4. Interventions to decrease disparities in the early detection and management of cardiovascular disease

<table>
<thead>
<tr>
<th>Ref</th>
<th>Loc</th>
<th>Eth</th>
<th>Focus</th>
<th>Intervention(s)</th>
<th>Design</th>
<th>Control</th>
<th>n, Duration</th>
<th>Outcome(s)</th>
</tr>
</thead>
</table>
| Cooper et al. 2011   | USA | AA  | Hypertension | Patient and/or Clinician – Physician communication skills training and patient coaching by community health workers | RCT    | Minimal   | n=41 primary care physicians, 279 patients | More positive communication change scores for trained physicians  
Greater improvements in patient report of physicians’ participatory decision-making, and patient involvement in care (doctor facilitation & information exchange)  
Non-significant reduction in SBP in intervention groups |
| Fort & McClellan 2006 | USA | EM  | Workforce  | Organisation – Community service project for pre-professional health care students | CS     |           | 5 cohorts, approx. 32 students per cohort | Increased personal and professional understanding of health disparities, determinants of health, and possible interventions |
| Hayman 2010          | Australia | AU  | Clinic     | Organisation – access barriers identified from community consultation and strategies formulated and implemented | CS     |           |             | Increase from 12 Indigenous clients in 1995, to around 4000 and approx. 1200 doctor consultations per month  
Early detection and management of chronic disease, including CVD |
| Hebert et al. 2011   | USA | AA  | Hypertension | Patient and/or Clinician – home blood pressure monitors alone, and with nurse manager follow-up | RCT    | Usual care | n=416, regular contact | Decrease in SBP in monitor + nurse management group at 9 months  
No significant differences in SBP at 18 months |
| Hyman et al. 2011    | USA | AA  | Hypertension | Patient and/or Clinician – uncertainty reduction tools for physicians               | Cluster RT | Usual care clinic | n=665, recruited over 15 months | Lowered measured BP in intervention clinic patients |
| Kretzer et al. 2007  | USA | HW PI | Hypertension | Patient and/or Clinician – class on self identity and learning new ways to create balance through Ho’oponopono | Pre-Post |           | n=23, 4-hour class | Decreases in SBP and DBP post intervention  
Spirituality scores increased |
<p>| Tibby &amp; Walters (2010) | Australia | AU  | Specialist services | Organisation – provision of outreach cardiac service directly to rural and remote communities | CS     |           |             | 1400 presentations to date; 98% attendance rates, with communities expressing high satisfaction |</p>
<table>
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<tr>
<th>Ref</th>
<th>Loc</th>
<th>Eth</th>
<th>Focus</th>
<th>Intervention(s)</th>
<th>Design</th>
<th>Control</th>
<th>n, Duration</th>
<th>Outcome(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toomey 2007</td>
<td>USA</td>
<td>HW</td>
<td>Carotid intima-media thickness</td>
<td>Patient and/or Clinician – Transcendental Meditation (TM) programme</td>
<td>Single blind</td>
<td>Health education (HE)</td>
<td>n=48, 9 month programme</td>
<td>Marginally significant reduction in CIMT for high cholesterol subgroup in TM group Reduction in depression for TM group Within TM group: reduction in DBP, SBP, total cholesterol, LDL; increase in HDL. Within HE group: reduction in LDL and total cholesterol</td>
</tr>
<tr>
<td>Turner et al. 2012</td>
<td>USA</td>
<td>AA</td>
<td>Hypertension</td>
<td>Patient and/or Clinician – trained peer patient calls and practice team visits</td>
<td>RCT</td>
<td>Usual care</td>
<td>n=280, 3 monthly calls, nurse visits on alternative months</td>
<td>Absolute reduction in SBP greater for intervention group</td>
</tr>
</tbody>
</table>

Note. AA=African American; AU=Australian Aboriginal; BP=blood pressure; CIMT= carotid intima-media thickness; CS=Case Study; CVD=cardiovascular disease; DSP=diastolic blood pressure; EM=Minority; Eth=Ethnicity; HDL=high-density lipoprotein; HP=Hispanic; HW=Hawaiian; LDL=low-density lipoprotein; Loc=location; n=number; PI=Pacific Island; PS=Prospective Study; RCT=Randomised Control Trial; RT=Randomised Trial; SBP=systolic blood pressure
intensive diet interventions included community nurses, community health workers, and clinics located within communities. Less favourable results were reported in the intervention group, where the absolute reduction in systolic blood pressure (SBP) was significantly greater than the usual care group. However, these changes were not maintained at the 18-month follow-up. No changes were observed in diastolic blood pressure (DBP).

Hyman and colleagues (2011) conducted a cluster randomised trial with five intervention clinics and five usual care clinics to examine whether uncertainty reduction tools (i.e., graph of recent patient BP measurements, referral forms for follow-up patient procedures) would lead to the intensification of treatment by clinicians and consequent improved patient BP. Sources of uncertainty include questions about the representativeness of patients’ BP recorded at the clinic visit, and patient adherence to treatment. Hyman et al. (2011) provided clinicians in the intervention clinics with more information in the patient notes of 320 African American (64%) and Hispanic (26%) patients with uncontrolled hypertension (there were 345 patients monitored in the usual care clinics). The uncertainty reduction tools supplied in the patients’ notes, along with a referral form, before each patient visit included 24 hour ambulatory BP monitoring, electronic bottle cap assessment of medical adherence (with counselling for non-adherent patients), lifestyle assessment and counselling. At follow-up (median time of 24 months), physicians in the intervention care clinics had intensified treatment for a significantly greater proportion of patients compared to physicians in the usual care clinics (81% vs. 67% of patients). Multi-level mixed effects longitudinal regression modelling predicted that the difference in SBP and DBP that was attributable to the intervention was -2.8 mmHg by month 24 and -6.5 mmHg by month 36. There was a significant reduction in blood pressure among patients in the intervention clinics who were referred for counselling and monitoring. The authors note that while their ‘baseline educational program stressed the importance of treating BP to less than 140/90 mmHg… [and] physicians did not act aggressively to reach the lower recommended treatment targets in the large number of patients with diabetes’ (Hyman et al. 2011: 418). The individual, rather than guideline-driven, decision-making of physicians may therefore have lessened the outcomes achieved from this intervention.

4.1.2 Organisational interventions

Davis et al. (2007) reviewed 18 provider and care delivery focused hypertension interventions. Promising results on BP control were found in the small number of clinic re-organisation and pharmacist and community health worker interventions. Nurse-led interventions, several of which also involved community personnel, were more popular and were generally beneficial for BP control. Davis et al. (2007) reviewed five provider and health care organisation focused interventions that led to improved lipid levels (three of which were also included in the hypertension interventions). One intervention involved clinic reorganisation while the other four involved health professionals (e.g., pharmacists, nurses, community health workers) in care management.

“In summary, interventions designed to improve lipid levels in communities of color have had mixed results; however, several interventions intended to bring about overall improvements in cardiovascular risk factors via health care organization-level interventions or care management with nurses have successfully improved lipid levels (Davis et al 2007: 605).”

From their review of 33 interventions to reduce health disparities in CVD in African Americans, Crook and colleagues (2009) concluded that changes in models of healthcare delivery were the most effective. These interventions included community nurses, community health workers, and clinics located within communities. Less intensive diet and physical activity interventions were just as successful as more intensive interventions and did not suffer to the same extent from participant fatigue. Faith-based interventions were more successful when...
church leadership was involved from the outset and congregation members were included as members of the study team.

Huffman and Galloway (2010) gathered information about successful Indigenous CVD programmes in the U.S., Canada, Australia and New Zealand. They used several search methods to identify successful programmes, and relied largely on personal communications from colleagues and members of their professional networks. Their focus was on healthcare initiatives that were controlled and delivered by Indigenous peoples themselves, with many implementing comprehensive programmes based on current models of chronic care management within the context of community leadership and engagement (e.g., remote clinics), traditional methodologies (e.g., spiritual treatments), and cultural responsiveness (e.g., encouraging attendance by, and caring for, patients’ families). They found that community involvement and the use of Indigenous community workers were common features of successful Indigenous CVD programmes. Other common features were regular contact with participants, and a focus on high-risk individuals. Their conclusion was that

‘...the integration of the program into the cultural assets of the community and empowerment of the culture may be the most valuable asset and most productive component of the intervention... [Within this context] optimal programs are focussed exclusively on the Indigenous population and tightly integrate the mental, cultural, and spiritual aspects into the treatment and prevention components, with an emphasis on health literacy and understanding of interventions within the context of the culture [and] the development of the next generation of [Indigenous] health leaders’ (Huffman and Galloway 2010: 357)

Jones, Trivedi and Ayanian (2010) conducted case studies of five U.S. health care organisations (two community health centres, two Indian health centres, and an organisations delivering a Medicare programme), about the interventions they had put in place to reduce disparities or improve care for minorities with CVD or diabetes (e.g., quality data monitoring, team-based care, intensive care management). These interventions were generally about quality improvement and while they had not been systematically evaluated many were associated with improved minority patient outcomes. The researchers conducted a thematic analysis of provider documentation and key informant interviews to identify key characteristics of the interventions. Their findings are summarised in Table 5. The contextual factors taken into account in the quality improvement initiatives related to external accountabilities and the alignment of incentives. The organisational or intervention factors were about organisational commitment, having a population health focus, using data to inform solutions, and taking a comprehensive approach to quality. These factors varied across the providers but each provider had given the factors some consideration in the development and implementation of their initiatives.

Three of the individual intervention studies included in this review looked at organisational (including workforce) interventions (Table 4). A clinic-based intervention developed after canvassing the Indigenous community about access barriers led to a dramatic increase in the number of Indigenous clients (from 12 in 1995 to around 4000) and consultations (approximately 1200 doctor consultations per month) at the Inala Indigenous Health Service, in Brisbane, Australia (Hayman 2010). This improved access has resulted in the identification of high prevalence rates of CVD risk factors, improved risk factor control, and the early detection and management of chronic disease. Hayman (2010) writes that the clinic’s change strategy involved the employment of more Aboriginal and Torres Strait Islander staff, the provision of a culturally appropriate waiting room, improved cultural awareness among all staff, dissemination of service information to the community, and the promotion of intersectoral collaboration.

Tibby and Walters (2010) describe the first four phases in a 10 year plan for the full implementation of an Outreach Cardiac Specialist service to rural and remote Indigenous communities in Queensland; namely, community engagement, recovery intervention, capacity building, and self-governance. The implementation of phase 2 of this plan, recovery intervention, has resulted in over 1400 episodes of care for those with rheumatic heart disease, ischaemic heart disease, and congenital heart conditions, including many non-Indigenous community members. Attendance rates have been near perfect (98%) and community satisfaction with the service has been high. The next, capacity building, phase involves a plan to train community members to provide rehabilitation and risk prevention programmes. The authors conclude that ‘traditional values can work harmoniously with an inclusive medical approach’ (Tibby and Walters 2010: 366).

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1 The organisations were chosen from a long-list that was compiled as a result of a literature review, examination of programmes and initiatives being offered, and consultation with health practitioners, researchers and policy makers. These organisations had to have ‘implemented one or more interventions to reduce racial and ethnic disparities or improve the quality of care for cardiovascular disease and/or diabetes for specific minority racial/ethnic groups’ (Jones et al 2010: 338). Five organisations to meet the three categories of type of health centre were then selected from this long-list.
Table 5. Factors identified by health care organisations as likely determinants of successful interventions to reduce disparities in outcomes for patients with CVD or diabetes

<table>
<thead>
<tr>
<th>Contextual Factors</th>
<th>Variation by organisation type</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>External accountability</strong></td>
<td>Accountability to third-party payers and insurers was identified as critical in the community health centres and Indian health programs, where the influence of peer organizations was also stressed. The Indian health programs and health plan put particular emphasis on accountability to communities.</td>
</tr>
<tr>
<td><strong>Alignment of incentives</strong></td>
<td>The community health centres and Indian health programs were particularly concerned with changing systemic financial incentives that emphasize productivity to reward improved quality and equity. In all organizations there was recognition of the benefit of non-financial incentives.</td>
</tr>
</tbody>
</table>

| Organisational or intervention factors | |
| **Organisational commitment** | For the community health centres and health plan, political commitment from the leadership was identified as critical. In the Indian health programs this was less evident, possibly as commitment to reducing disparities was seen as implicit. The need for allocation of resources to specifically address quality and disparities was identified across all organizations. |
| **Population health focus** | Among the community health centres and Indian health programs there was a strong sense that the model of care needed to be changed to engage better with patients. In the health plan setting the emphasis was more on health education to encourage members to utilize available services. |
| **Use of data to inform solutions** | The importance of using data from their own setting was noted by all organizations. The health plan identified the lack of race/ethnicity data as a major obstacle to addressing disparities. |
| **Comprehensive approach to quality** | Concern about undue emphasis on technical indicators of quality was expressed in the community health centres. Patient-centeredness was universally identified as important, but was also regarded as difficult to achieve. |

Source. Jones, Trivedi and Ayanian (2010: 339 Table 2)

As part of their Nashville REACH\(^2\)2010 project Meharry Medical College, in collaboration with the Matthew Walker Comprehensive Health Center, developed a community-based participatory research experience for pre-professional health care students. The goal of the project was to increase the awareness and sensitivity of future minority health care providers to issues in minority and poor, underserved populations so that they might contribute, in time, to the elimination of racial and ethnic health disparities (Fort and McClellan 2006: 79). Five cohorts, of approximately 32 students each, participated in this initiative. Students reported on the value of their experience in enhancing their personal and professional understanding of health determinants and disparities, as well as increasing their knowledge of the possibilities for community-based interventions to reduce disparities.

Aotearoa New Zealand

The PHARMAC initiative ‘One Heart Many Lives’ is aimed at Māori and Pacific Island men over 35 years of age, and who are living in high need areas of the country. The programme was adapted for local use so that the community could drive it. The initiative was designed to encourage men to:

- get their hearts checked and seek help and medical management if needed
- improve awareness of heart disease and the likely outcomes if it is diagnosed and treated
- improve lifestyle habits as part of self management
- take long-term cholesterol lowering medication (and other heart medications) to help decrease the risk of heart disease (Ministry of Health, National Health Board 2011: 7).

Evaluations of the One Heart Many Lives programme have found that it increases understanding of heart disease and the importance of lifestyle changes to reduce risk among its target audience. The prescribing of statins for Māori and Pacific people has also increased.\(^3\)

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\(^2\) Racial and Ethnic Approaches to Community Health, a grant initiative from the Centers for Disease Control and Prevention.

\(^3\) One Heart Many Lives evaluation document for the Ministry of Health, 2005.
A number of Māori health organisations provide programmes and services designed to improve Māori access to CVD risk assessment (Mauriora ki te Ao 2009). Nine Māori health organisations were identified as successful providers of cardiovascular and diabetes health care services (Mauriora ki te Ao 2009). The distinctive features of these nine providers included:

- being ‘led, governed or owned by iwi/Māori organisations and groups’ (Mauriora ki te Ao 2009: 60), with strong leadership at governance and management
- having strong aspirations for whānau ora, and a commitment to health promotion and disease prevention
- building trusting and effective relationships
- taking a holistic approach to health care provision, and continuously seeking quality improvements
- working in multidisciplinary teams, while acknowledging the lead role of nurse
- developing and strengthening collaborative relationships with other organisations
- being strongly community focused, with community accountabilities
- offering a range of health and non-health services
- recruiting and training local people, including making space for voluntary contributions

These features align with international interventions that support strong community linkages, employment of local people (e.g., as community health workers), and quality improvement. The additional features recognised in the local context are the importance of whānau ora, holistic service provision (multidisciplinary teams, collaborative relationships with other organisations), and the development of trust relationships with patients.

### 4.2 Intensive Assessment and Treatment

Seven of the studies reviewed by Davis and colleagues (2007) were of multi-component interventions to improve care for patients with heart failure (e.g., patient education and skill development, follow-up and medication adjustment, specialty nurse care management, and health professional oversight). They write that ‘a key educational message consistent in most of the interventions was the early recognition of symptoms and signs of fluid overload and prompt adjustment of diuretic dose’ (Davis et al 2007: 76S). These interventions decreased hospitalisation rates, and were validated best in patients with advanced heart failure (vs. those with mild to moderate heart failure where validation had still to be demonstrated). No acute coronary heart disease care interventions were included in their review.

From their review of published reports about interventions to reduce CVD care disparities the North American Coalition to Reduce Racial and Ethnic Disparities in Cardiovascular Disease Outcomes (credo) advocate for ‘performance-based quality improvement, provider cultural competency training, team-based care, and patient education as strategies to promote the elimination of disparate CVD care and in turn might lead to better outcomes’ (Yancy et al 2011: 245). Initiatives along these lines have been launched by credo. The critical first step in these initiatives is ‘an awakening in our own field that disparate health care is real’ after a survey of cardiologists found that only one-third recognised the existence of disparities, and fewer still admitted that these disparities existed in their own practice setting (Yancy et al 2011: 247).

Four of the individual intervention studies included in the present review explored organisational interventions (see Table 6). Hospital-based quality assurance initiatives were funded in North America by the Robert Wood Johnson Foundation programme ‘Expecting Success’, to contribute to the elimination of acute myocardial infarction and congestive heart failure disparities for African American and Hispanic patients. Ten diverse hospitals were funded to develop and implement a range of techniques and tools (e.g., chart reviews, performance reviews and reporting, patient education material). All ten hospitals were also encouraged to implement new procedures for collecting patient data about ethnicity, race and language, and the success of this was dependent upon the provision of good staff training along with a clear rationale for staff and patients about the data collection (Billings et al 2010). The initiatives implemented in the hospitals improved access for African American and Hispanic patients. Over the life of the programme, on ‘measures of ideal care’, all hospitals improved for acute myocardial infarction, and most for heart failure. Hospitals that had the greatest success worked within their pre-existing relationships and structures. Those hospitals that went outside these boundaries (e.g., new relationships, expanded services) faced many challenges with the result that their programmes were scaled back.

‘One site has gone from an ambitious community-wide outreach program to a modest educational program for cardiac discharges, to an even more modest educational program focused only on Medicaid managed care patients. Another site proposed a community demonstration project that included sending a cardiac nurse-educator from the hospital out to community clinics in order to train clinic staff in post-discharge care for cardiac patients. They found it difficult to engage the staff in these busy community clinics and eventually it was decided to focus on educating patients in self-management’ (Billings et al 2010: 33).
Table 6. Interventions to decrease disparities in the intensive assessment and treatment of cardiovascular disease

<table>
<thead>
<tr>
<th>Ref</th>
<th>Loc</th>
<th>Eth</th>
<th>Focus</th>
<th>Intervention(s)</th>
<th>Design</th>
<th>Control</th>
<th>n, Duration</th>
<th>Outcome(s)</th>
</tr>
</thead>
</table>
| Billings et al. 2010 | USA | AA HP | AMI & HF disparities | Organisational – implementation of new patient information collection procedure, plus tools to improve cardiovascular care | CS           | n=10 health care organisations | All organisations improved on measures of ideal AMI care  
Variable success for HF   
Success related to utilisation of existing structures and relationships |
| Cantor et al. 2009 | New Jersey USA | AA | Diagnostic coronary angiography | Organisational – legislative reforms linking licensure for profitable cardiac services to improved access | Obs          | 3 sites |             | Elimination of large access disparity |
| Cohen et al. 2010 | USA | AA HP | AMI | Organisational – assessment of whether quality improvement programmes improve care guideline adherence by hospitals | Record review | n=443 hospitals, 142593 patients | Significant gap in defect-free care for AA in first half of study disappeared in second half of study |
| Curtis et al. 2010 | USA | AA | D2B times | Organisational – several initiatives to improve D2B performance | Time series   | n= 207875 patients with STEMI | Dramatic improvement in D2B times over 4 years |

Note: AA=African American; AI=American Indian; AMI=acute myocardial infarction; CS=Case Study; D2B=door-to-balloon; Eth=Ethnicity; HF=congestive heart failure; HP=Hispanic; IMT= intimal medial thickness; LDL-C= low-density-lipoprotein cholesterol; Loc=location; LV= left ventricle; n=number; Obs=observational study; PI=Pacific Island; RCT=Randomised Control Trial; Ref=Reference; RT=Randomised Trial; SBP=systolic blood pressure; STEMI= ST segment elevation myocardial infarction
Hospital regulatory reforms begun in 1996 in New Jersey enabled Cantor and colleagues (2009) to study the impact of additional hospitals being licenced to provide low-risk patients with angiography, the imposition of minimal procedure volume standards, and a requirement that hospitals prepare annual ‘community outreach, access and prevention’ plans (p.1522). Further amendments to address access disparities were made in 1998 (competitive review of licensure) and 2001 (end of pilot, making changes permanent, and process for low-risk facilitates to become full-service). The authors selected three states that had not experienced these regulatory reforms to compare New Jersey against. By 2002-03 the black-white access gap in New Jersey had disappeared, with the greatest reduction occurring the year after the initial reform. The average number of procedures rose 15 percent for white patients, compared to 46 percent for African American patients, between 1995-6 and 1997-2001. Cantor et al. (2009: 1528) concluded that the ‘New Jersey policy intended to increase diagnostic coronary angioplasty service capacity and address access gaps for underserved populations appears to have eliminated a large age- and sex-adjusted difference in utilization between black and white patients’.

In a research letter Curtis and colleagues (2010) report on their analysis of door-to-balloon (D2B) time data for 207,875 patients with STEMI who underwent primary percutaneous coronary intervention at one of 1413 hospitals between July 2004 and June 2008, on the premise that since 2004 there had been several high profile initiatives in the US to improve national D2B times. For example, Krumholz and colleagues (2008) promote six key strategies to reduce D2B times, on behalf of the Door-to-Balloon: An Alliance for Quality (see Table 7). The difference in medium D2B time for black patients and white patients narrowed from 18 minutes in 2004-5 to 7 minutes in 2007-8, as a result in more rapid improvements in D2B times for black patients. The data were also consistent with a previous observation by the authors ‘that a large proportion of race-related disparities in D2B times was attributable to differences in the care delivered at hospitals that treated a higher proportion of black patients’ (Curtis et al 2010: 993). Although Curtis et al. (2010) is not specific about the changes occurring in the hospitals they sourced data from, they cite the Alliance’s dissemination of these strategies as important.

Table 7. Strategies for hospitals to reduce D2B times

<table>
<thead>
<tr>
<th>Key Strategies</th>
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<tbody>
<tr>
<td>• Activation of the catheterization laboratory by emergency medicine physicians</td>
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<tr>
<td>• Establishment of a single-call system for activating the catheterization laboratory</td>
</tr>
<tr>
<td>• Expectation that the catheterization team be available within 20 to 30 min of being paged</td>
</tr>
<tr>
<td>• Use of data monitoring and prompt data feedback to emergency department and catheterization laboratory staff</td>
</tr>
<tr>
<td>• Senior management support and organizational environment that fosters and sustains organizational change directed at improving D2B time</td>
</tr>
<tr>
<td>• Team-based approach from ambulance to balloon, within a culture of continuous quality improvement</td>
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<tr>
<th>Optional Strategy</th>
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<tr>
<td>• Use of pre-hospital electrocardiogram to activate the catheterization laboratory</td>
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</table>

Cohen and colleagues (2010) conducted a record review of 142,593 myocardial infarction patients receiving care between January 2002 and June 2007 at 443 hospitals participating in an American Heart Foundation initiative, ‘Get With the Guidelines – Coronary Artery Disease’ programme. This programme included learning and best practice sharing sessions, workshops, and follow-up. Hospitals also submitted patient data to a registry that allowed for patient management and reporting, as well as hospital-wide data and clinical decision-making support. The authors found that use of performance measures improved over the five years of the study. In addition, the significant gap in defect-free care (proportion of patients receiving all eligible performance measures) for African American patients (compared with white and Hispanic patients) in the first half of the study had disappeared in the second half of the study.

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4 Data reported by hospitals to the Quality Improvement Organization Inpatient Clinical Data Warehouse for the Centers for Medicare & Medicaid Services Reporting Hospital Quality Data for Annual Payment Update (RHQAPU) program (Curtis et al: 992).
4.3 Rehabilitation and Support Services, Including Quality of Life and Survivorship, and Palliative and End of Life Care

Aotearoa New Zealand

At a secondary care organisational level, Kerr and colleagues (2010) reported on the use of Acute Predict within a coronary care unit. ‘The aim of the Acute Predict project is to ensure patients with acute coronary syndrome receive appropriate evidence-based medicine short- and long-term, regardless of age, gender, socioeconomic status or ethnicity. The project is supported by novel electronic decision support, and real-time key performance indicator and outcome reporting’ (Kerr et al 2010: 378). The use of Acute Predict led to an increase in the in-hospital provision of cardiac rehabilitation (from 54% in 2004-5, to 84% in 2009), with no patient ethnicity or socioeconomic status difference in utilisation of Acute Predict.

5 Discussion

A large proportion of Māori deaths from cardiovascular disease are preventable (Ministry of Health 2007). Improving access to cardiovascular health care for Māori will mean more effective and comprehensive management of those at high risk and a consequent reduction in Māori deaths. The present review examined initiatives that have improved access for Māori, other Indigenous people, or ethnic minority people to cardiovascular health care. The broad intervention strategies shown to improve access to cardiovascular health care for people in one or more of these groups are summarised in Table 8 below.

Hypertension among ethnic minority populations has been shown in several large studies to be amenable to effective and sustainable change (lowering) through culturally responsive health care that uses system level (access to care) as well as personal (behavioural and pharmacological) strategies. ‘Thus, the onus is on providers to treat individuals early…using evidence-based culturally/linguistically appropriate strategies’ (Stuart-Shor et al 2012: 177). Stuart-Shor et al.’s (2012) review of behavioural interventions demonstrated the efficacy of culturally and linguistically tailored interventions, delivered by multidisciplinary teams that included community health workers. Community health workers can play an important role on health teams (Stuart-Shor et al 2012). They bridge cultural gaps between non-Indigenous health professionals and community members, and can also bring their expertise to bear on the design and implementation of culturally appropriate health care. If community health workers become part of a multidisciplinary team other team members need to be respectful of the value and expertise the community health worker brings to the team’s ability to provide accessible services.

While the success of patient educators or coaches in hypertension interventions is equivocal, Davis et al. (2007) reinforced the importance of nurse-led interventions that involved community personnel. Stuart-Shor et al. (2012) also highlighted the leadership of nurses. The connections made between nurses and the patients may be an important factor in the success of interventions. These connections are made as a matter of cultural protocol between Māori and Pacific people, and sound similar to the patient-centred connections recommended more generally for interventions designed to reduce disparities. For example, the North American Coalition to Reduce Racial and Ethnic Disparities in Cardiovascular Disease Outcomes (credo) endorses ‘cultural competency’ which is aligned with patient-centred care and includes:

- understanding the patient as a unique person
- exploration of and respect for patient beliefs, values, meaning of illness, preferences, and needs
- awareness of one’s own biases and assumptions
- provision of information and education tailored to patient level of understanding (Yancy et al 2011: 249)

Huffman and Galloway’s (2010) research on Indigenous health providers highlighted similar themes while strengthening the importance of community engagement and leadership, and a holistic approach to health care delivery that combined quality western medicines with traditional healing practices and cultural responsiveness. Some support for the efficacy of this approach comes from studies with Native Hawaiians that used more spiritual methods to effectively reduce blood pressure (Kretzer et al 2007; Toomey, 2007). Kretzer et al.’s (2007) intervention also led to increases in participants’ spirituality. This is important given that Māori models of health (e.g., Whare Tapa Wha) encompass spiritual (wairua) wellness.

Stuart-Shor et al (2012) also identified the importance of building the capacity of health care providers to deliver culturally and linguistically tailored interventions. Health care providers can also locate their cardiovascular services within target communities – going to those communities rather than expecting people to make their way to the service (and experiencing barriers related to time, transportation, childcare, etc. (Jeremy et al 2010)).
<table>
<thead>
<tr>
<th>Strategy</th>
<th>Description</th>
<th>Cardiovascular Care Interventions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facilitate patients’ health literacy and ability to self-manage CVD</td>
<td>Initiatives improve the health literacy, understanding of interventions, and self-management ability and motivations of patients with CVD. This includes the provision of information and reminders.</td>
<td>Culturally tailored diet, nutrition and exercise programmes. Meditation for the management of blood pressure. Self-help groups. Home-based tools: • Blood pressure monitor • Web-based assessment.</td>
</tr>
<tr>
<td>Engage community health workers to work closely with patients</td>
<td>Community-based health workers (including promotoras, community nurses) assist patients with education, self-management, and access to health services by being a bridge between the community and health clinic.</td>
<td>Community health workers supporting care through: • Patient coaching • Home visiting Nurse-led interventions that involve community personnel.</td>
</tr>
<tr>
<td>Build a culturally competent health workforce</td>
<td>Health practitioners are supported to deliver culturally competent clinical care (including the use of reminders and protocols, as well as professional development).</td>
<td>Community-based participatory experiences for students in health education programmes. Communication training to support trusting and effective relationships, including participatory (with patient) decision-making. On-going workforce support, including the provision of clinical decision guidelines and other uncertainty reduction tools. Working in multidisciplinary teams.</td>
</tr>
<tr>
<td>Reorganise health clinics to improve accessibility</td>
<td>Changes are implemented to the way clinics organise and provide services.</td>
<td>Community engagement. Community involvement in planning, development of health care models, and delivery of health care. Accountability to communities. Clinics located within communities, or practice staff visits in the community. Culturally appropriate clinic waiting room. Recruitment and training of local people, including making space for volunteers. Quality improvement. Commitment to comprehensive quality improvement, including allocation of resources for quality improvement and reduction of disparities. Collection of accurate patient ethnicity data (and training of staff to do so). Use data and performance measures to inform solutions. Monitoring, evaluation and reporting of outcomes. Use of IT tools to ensure patients receive evidence-based medicine. Models of care. Community-oriented and culturally responsive models of care, including: • Traditional methodologies (e.g., spiritual treatments) • Patient-centred care • Behavioural and pharmacological care strategies • Indigenous health practitioner workforce • Team-based care. Pathways from primary to secondary to specialist care.</td>
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</table>
Improving Māori Access to Cardiovascular Health Care: Literature review

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Description</th>
<th>Cardiovascular Care interventions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health system</td>
<td>The health system can respond through funding formulas and strategies that reduce the barriers imposed by patient financial resource limitations.</td>
<td>Hospital regulatory reforms, including:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Minimal procedure volume standards for angiography</td>
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<tr>
<td></td>
<td></td>
<td>• Requirement for health organisations to prepare annual ‘community outreach, access and prevention’ plans</td>
</tr>
</tbody>
</table>

Source. Inspired by Chin et al. (2012: 996, Table 3)

Tibby and Walters (2010) achieved this in rural Queensland, with the result of more Indigenous and non-Indigenous community member consultations. A challenge for non-Indigenous health care providers working with Indigenous populations is whether going this next step in their practice, as modelled by Indigenous health providers, is possible and, if implemented, will improve access and outcomes for Indigenous patients and their families. Jeremy and colleagues (2010) recommended the development of healthcare models in collaboration with the communities they are supposed to service. This is a more organisational take on Stuart-Shor et al.’s (2012: 180) recommendation that clinicians ‘strive for collaboration’. The analysis by Jones, Trivedi and Ayanian (2010) suggests that this striving is more likely to occur in Indigenous and community-based health care settings, whereas other settings may be more likely to settle on educating patients and encouraging them to use an unchanged service. Hayman’s (2010) report on an Indigenous health service in Brisbane is testimony to this. Organisational changes to make the service more culturally responsive resulted in a huge increase in Indigenous patient numbers and consultations.

Initiatives taken by hospitals involved in the ‘Expecting Success’ pilot also demonstrated the value of organisational change for improving access for minority patients (Billings et al 2010). An important step taken by these hospitals was the collection of patient-defined ethnicity/race. New Zealand hospitals and other health care providers have received Ministry initiated guidelines and training in collecting accurate ethnicity data (Ministry of Health 2004). However Riddell and colleagues (2008) found that the ethnicity recorded on patients’ primary care records in 18 general practices was the same as patients’ self-identified ethnicity for only 65 percent of their Māori sample, compared to 91 percent of their New Zealand European sample. Likewise Cormack and McLeod (2010) found that misclassification of Māori ethnicity occurred in both primary care and hospital settings, resulting in the undercounting of Māori. They concluded that ‘a concerted focused and resourceful effort is still required to ensure continued improvements to data quality going forward, as well as to provide tools to support the maintenance of high quality datasets’ (Cormack and McLeod 2010: 59).

Stuart-Shor et al.’s (2012: 177) call for ‘evidence-based culturally/linguistically strategies’ applies to tools as well. Hyman et al.’s (2011) clinician intervention to reduce sources of uncertainty in the implementation of guideline care for patients with hypertension resulted in a significant reduction in patient blood pressure but raised questions about health providers’ threshold for aggressive intervention, which was higher than guideline advice. Patients were therefore not getting access to treatment because clinicians had more tolerance for their hypertension than was recommended; that is, clinicians were not following practice guidelines. On the other hand the use of an ‘electronic backbone’, Acute Predict, in a coronary care unit led to the elimination of disparities in the provision of in-hospital cardiac rehabilitation (Kerr et al 2010). It may be that the ability of tools and guidelines to support disparity reduction depends on both the evidence-base upon which they sit, as well as the engagement they gain from the human clinicians who use them. The New Zealand Guidelines Group is active in the area of cardiovascular disease, and the National Cardiac Surgery Clinical Network is developing support systems and processes.

Indigenous researchers and others have raised questions about the use of key assessment tools, including the FRE, with some having methods to correct for immediate problems (Brown et al 2008; Brown et al 2010). This raises the question more generally of how valid the tools used in cardiovascular disease risk assessment and management are for Indigenous peoples.

Regulatory reform can also shift hospital practice to reduce or even eliminate access disparities for minority groups (Curtis et al 2010; Cantor et al 2009; Cohen et al 2010). Policy drivers can also be exerted to ensure the collection of accurate ethnicity data, the development of local-level plans and initiatives, and engagement with Māori leaders and communities (Bramley et al 2004). Grant et al. (2009: 11) maintain that one of the first steps in the reduction of disparities is the articulation of a priority to eliminate disparities. The legislative and strategic approaches taken by the government are therefore important in setting the scene for a commitment, and achievement of goals, to reduce disparities.

In summary, this review of interventions to reduce cardiovascular health care disparities has highlighted the importance of interventions at different levels, including community outreach, clinic reorganisation (including
investing in a culturally responsive workforce and the implementation of evidence-based guidelines and tools), medication, and the development of health system strategic and policy drivers.

5.1 Limitations of the Present Review

Jeremy and colleagues (2010) reinforced the importance of addressing fundamental barriers to cardiovascular healthcare access for Indigenous peoples. These include the disenfranchisement and marginalisation of Indigenous people from their own land and from the social and economic resources of the state or country in which they reside. In the Māori Cardiovascular Action Plan this aligns with the first action area of policy development that recognises the Treaty of Waitangi and the need for active engagement with Māori (Bramley et al 2004). Many of the health interventions reviewed here recognised the poor cardiovascular health of the Indigenous or ethnic minority group they were targeting. However few, if any, sought to address these fundamental barriers or reported that they were even explicitly acknowledged in their engagement with their target communities. A clear indication of this is the focus on the reduction of disparities without explicit regard to how this might be only part of the aspirations of a community for cardiovascular health and wellness.

This review has included interventions studies published in peer review journals. This has allowed for the inclusion and consideration of a range of intervention evaluation methodologies, including random control trials and community based participatory research. It is appreciated that the range of studies included may have different ‘quality’ implications for different audiences. It is anticipated that the intervention summary tables and descriptions of the studies will provide enough information for those who want to be more selective about what they consider to be a quality study.
6 References


Cox J, Coomey K. 2010. Nursing education and have a 50% increased mortality following discharge from a cardiac or vascular admission when compared to the least deprived patients. Journal of General Internal Medicine 26(11): 1297-1304.


Ellis C, Pryce A, MacLeod G, et al. 2012. The most deprived Auckland City Hospital patients (2005–2009) are 10 years younger and have a 50% increased mortality following discharge from a cardiac or vascular admission when compared to the least deprived patients. New Zealand Medical Journal 125(1357): 1-21.


7 Appendix

Appendix A. Method - Literature Search, Quality Rating, and Abstraction

General Framing

Multiple electronic databases were searched (MEDLINE, the Cochrane Register of Controlled Trials, etc.) for evaluation studies of interventions designed to improve access to care, along the continuum of care, for those suffering from diabetes. The search covered the last eight years, from 2006 to 2012. Indigenous peoples (Māori, native, indigenous, Aborigine, First Nations, Indian) or ethnic minority groups (Hispanic, African American) had to be either the main focus (comprising more than 50% of the study participants), or a subgroup in a larger trial.

It is acknowledged that 'the commonality of 'being Indigenous' [or minorities] overrides the distinctly different historical, political and cultural contexts in which these populations live' (Cormack et al 2010: 91). However, as Shaouli and Thompson (2010) argue, there are enough commonalities in the experiences of the Indigenous peoples of Australia, New Zealand, Canada and the United States of America to warrant comparative analyses as well as the close examination of what ‘works’ for the lessons to be learned. Although research on interventions involving other ethnic minorities may be more tangential to the experiences of Indigenous peoples some of this literature has also been included here for insights it might provide.

MEDLINE MeSH terms used related to:

- Evaluation studies of interventions (Evaluation Study, Clinical Trial), or
- Comparative study or guideline (Guideline, Practice Guideline, Guideline Adherence) or meta-analysis (Meta-Analysis) or multicenter study (Multicenter Studies) or validation study (Validation Studies));
- Designed to improve access to health services (Health Services Accessibility, Delivery of Health Care, Quality of Health Care)
- For Indigenous peoples (indigenous or maori or aboriginal or aborigine or native or first nations), or
- Minority ethnic groups (e.g., African Continental Ancestry Groups, African Americans, Hispanic Americans, Mexican Americans)

Search Terms

MEDLINE MeSH terms for Cardiovascular Disease:

- Heart failure (Heart Failure)
- Coronary artery disease (Coronary Artery Disease, Myocardial Ischemia, Myocardial Revascularization, Coronary Artery Bypass)

Journal, Reference Lists, Citations and Author Searches

This initial search was followed up by hand searches of the last two years of key journals for content relating to improving access to health services for Indigenous peoples, and ethnic and minority groups. The reference lists of located articles were also scanned for other relevant papers and follow-up was done of citations of key articles, and other articles written by key authors/researchers.

Organisational Search

The publication lists of organisations working to improve access and/or reduce disparities for Indigenous and minority peoples were scanned for relevant publications. Strategic and policy documents were also scanned for relevant publications. Organisations and documents were located from an initial Google search using similar terms to those used above, and then following leads from located items, portals, government and research websites, to search for further information.
Inclusion & Exclusion Criteria

Included:

• Indigenous people or ethnic minorities were the main focus of an intervention (defined as >50% of the participants), or a key focus of an intervention such that the authors specifically describe findings for Indigenous/ethnic minority participants.

• ‘Culturally tailored’ (i.e., ‘utilizing individualized programming that takes into account participants’ personal preferences that are rooted in culture’ (Peek et al 2007)), as well as mainstream interventions.

• All studies that were published in peer reviewed journals were considered not to be fatally flawed and have been included (Dixon-Woods et al 2006). This has expanded the inclusion to pilot studies, along with a range of research methods.

• Systematic reviews of interventions to reduce ethnic health disparities

• Meta-analyses of Indigenous or minority disparities and explanatory frameworks, including implications for intervening to improve access to health services.

• Evidence-informed strategic documents to improve Indigenous peoples access to health services.

Excluded:

• Interventions not based in health care settings, apart from those delivered by health practitioners in the communities and homes of participants.

A large number of abstracts were identified in the initial search of the academic literature. The abstracts of these articles were read and the full papers for a number of abstracts were located. In addition to five reviews 15 CVD access intervention studies were included in the present review.

Data Abstraction

An abstraction form was adapted from Zaza et al. (2000). Information was collected on disease type, country location, motivation for intervening, approach/definition of ‘access’, type of and rationale for intervention, study design, target (e.g., provider, patient/family), participant numbers (intervention, control), ethnic/racial composition & demographic information (e.g., SES, location), setting (e.g., home, general practice, hospital), process measures, outcomes (including patient, workforce, system, family, community outcomes).

Study Quality Assessment

Cooper, Hill and Powe (2002: 477) list several limitations of studies examining initiatives designed to reduce disparities in health care and health status. These include ‘the lack of control groups, nonrandom assignment of subjects to experimental interventions, and use of health outcome measures that are not validated’. By comparison, those instigating initiatives from a Community-Based Participatory Research perspective argue that adhering to this traditional view of research ‘quality’ is antithetical to the community-up, collaborative implementation of interventions within tribal communities in the United States. The approach taken to quality in this project was the inclusion of peer-reviewed research of interventions to improve access to diabetes health care (Dixon-Woods et al 2006). By far the majority of these studies include control groups and/or pre-post-intervention assessments that use validated outcome measures.
Appendix B. Behavioural Interventions to Reduce CVD Risk Factors

Stuart-Shor et al. (2012: 179-180) identified three themes from their review of behavioural interventions to reduce CVD risk factors:

1. ‘Interventions need to be culturally and linguistically tailored and individualized’ (see Table 1. below).
2. ‘Multicomponent, multidisciplinary teams, often led by a nurse, appear to be the most effective in addressing multiple risk reduction. Including community health workers in the multidisciplinary team is an important addition to address the needs of individuals living in under resourced areas’.
3. ‘Efforts that target providers and the way they deliver behavioral interventions are important to achieve sustained, system-wide improvement in outcomes’.

Table 9. Applying cross-cultural principles in individual or group behavioural/lifestyle counselling for prevention

<table>
<thead>
<tr>
<th>Issues</th>
<th>Applications</th>
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<tbody>
<tr>
<td>Core issues relate to both provider and patient knowledge, attitudes, and behaviour and include communication styles, trust, prejudice, patient, autonomy, family dynamics, role of the practitioner (expert vs. partner), traditions, customs, and spirituality.</td>
<td>In general, respect the uniqueness of each individual. Establish a relationship based on respect, empathy and curiosity. Assess decision-making preferences and the role of family. Use strategies for identifying and bridging different styles of communication. Offer prevention services in a manner compatible with the person’s cultural health beliefs, practices, and preferred language. Be aware of issues of mistrust and prejudice and the impact of race/ethnicity on clinical decision-making.</td>
</tr>
<tr>
<td>The meaning of illness and wellness varies among cultures. Cultural influences contribute to the person’s understanding of prevention and views on weight, physical activity, or a heart-healthy diet.</td>
<td>Ask questions to elicit the patient’s understanding of CVD, his or her own risk factors, clinical recommendations, and outlook on self-care. For example, what do you think caused the problem? How? What worries you the most? What kind of treatment do you think you should receive? What can you do to improve your health? Establish the patient’s views on treatment and goals with an emphasis on behaviour change.</td>
</tr>
<tr>
<td>Patient motivation for and adherence to behavioural change recommendations is strongly influenced by the social contexts of their day-to-day life, social support, previous experience with the healthcare system, and resources for change.</td>
<td>Assess supports for change (family, friends, environment) and resources, including access to healthy affordable places to exercise and purchase healthy food and literacy/language. Determine previous experiences with changing lifestyle behaviours. Use translators as needed and provide verbal and written information that is appropriate for cultural, linguistic, and literacy needs. Identify community-based behaviour change programs and other resources that may assist the patient in meeting his or her goals.</td>
</tr>
<tr>
<td>Bringing the patient perspective and clinician perspective together requires negotiation.</td>
<td>Strive for collaboration. Consider both your perspective and the patient’s perspective and come to a mutual understanding about what will work for this person in relation to lifestyle recommendations. Empathy, reflective listening, the ability to roll with resistance, and focusing on self-efficacy can facilitate negotiation.</td>
</tr>
</tbody>
</table>

Source. Stuart-Shor, Berra, Kamau, & Kumanyika (2012: 180 Table 2)