Improving Māori Access to Cancer 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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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
hapū sub-tribe
hauora health and wellness
Iwi tribe
kanohi ki te kanohi face-to-face
kanohi kitea a face that is known
mahi wairua a spiritual approach
mahi-a-whānau an approach for working with whānau
manaakitanga hospitality
Māori ordinary, normal; Indigenous peoples of Aotearoa
mirimiri massage
rangatahi youth, also referred to by others as taitamariki, tāiohi
rongoā traditional remedies
te reo Māori the Māori language
whakapapa genealogy
whakawhanaungatanga relating to other, establishing relationships
whānau extended family
whānau ora family wellness
whanaungatanga kinship, sense of kinship connection

Abbreviations

DHB District Health Board
RCT random control trial
REACH Racial and Ethnic Approaches to Community Health
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: 21). 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 cancer (reported here), cardiovascular disease and diabetes, 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

Māori adults have a higher rate of diagnosis of cancer than non-Māori (19 percent higher than the non-Māori rate), and their risk of dying from cancer is substantially higher still (78 percent higher risk of death from cancer compared to non-Māori) (Robson et al 2010). Robson et al. (2010: 47) concluded that ‘the higher exposure of Māori to neighbourhood deprivation contributes to the disparities between Māori and non-Māori in cancer incidence, mortality, stage at diagnosis, and survival’. Differential access to health care has also been found to contribute to ethnic disparities in cancer survival (McKenzie et al 2011; Stevens et al 2008). Hill and colleagues (2013) describe cancer care pathways as complex so that Māori are not necessarily disadvantaged at one step but suffer rather from accumulated disadvantage as they journey through the health care system and experience waits, delays and differential treatments.

Research has highlighted the barriers to Māori accessing cancer-screening programmes that would pick up cancer at early stages of disease progression. These barriers include people’s lack of awareness about services, embarrassment, worry about the procedure, and fear about the results (Beutow et al 2007; HSC 2012). Organisational barriers include cost, incomplete patient registration, issues with booking systems, and discouraging health professionals (Pitama et al 2012; Thomson et al 2009).

The provision of a culturally responsive environment has previously been identified by researchers as important for improving Māori access to cancer screening and treatment services. This includes good relationships between health care providers and Māori, the observance of cultural norms and holistic service provision, the availability of educational material that facilitates Māori health literacy, and having whānau friendly services (Pitama et al 2012; Walker et al 2008).

The health targets for 2013 to 2016 include ‘shorter waits for cancer treatment’, with the target being ‘All patients, ready-for-treatment, wait less than four weeks for radiotherapy or chemotherapy’ (Ministry of Health 2013: 12). The Ministry of Health Statement of Intent also prioritises cancer screening, and generally better access to cancer services.

Method

The review examined the recent (post-2006) literature on interventions to improve access to cancer 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

Culturally tailored education material helps increase patient knowledge and may support screening behaviour. Such information can also be tailored to address patient-specific needs and barriers through interactive delivery platforms (e.g., websites). These low intensity resources are also more effective when they are used in conjunction with other community-based or navigation services. This can be supported by health system investment in community capacity to deliver educational programmes.

Community health workers can facilitate cancer patients’ health care journeys through the provision of culturally tailored support, education, counselling and coaching. Community health workers may be from the same communities as cancer patients, and may themselves be cancer survivors.
Patient navigators can support patients’ cancer care journeys, and buffer them from a health practitioner workforce or health organisation that lacks cultural competence.

Building health practitioners skills improves their knowledge, attitudes and ability to be culturally responsive. Chart-based reminders for health practitioners also improve health care delivery.

Organisational changes, including responsiveness to community input, can improve patient access to health care. However a lack of organisational stability or leadership can derail organisational initiatives.

The health system can support patient access to cancer care through the reduction of any financial barriers and through national campaigns (e.g., to encourage screening).

Effective interventions are summarised in Table 1. These are organised according to whether they focus on:

- Patients through the reduction of logistic and financial barriers or the provision of educational information
- Community health workers and other health practitioners who work with patients in their community to support patient education, screening and access to other cancer health care
- Building a culturally competent health practitioner workforce
- Clinic reorganisation to facilitate accessibility
- Health system initiatives

Table 1. Intervention strategies to improve access to cancer health services

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Description</th>
<th>Cancer Care Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facilitate patients’ health literacy and access to cancer screening services</td>
<td>Initiatives improve the health literacy, understanding of interventions, and access to services for patients. This includes the provision of information and reminders.</td>
<td>Reduce financial and logistic barriers to screening (eg, provide transport, child care).&lt;br&gt;Provide culturally tailored screening information (written, DVD, web-based), community education, and mass media cancer screening campaigns.&lt;br&gt;Explore individual barriers to screening and use this information to tailor information and cancer screening options in low-intensity interventions (eg, websites).</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>Employ community health workers to support care through culturally tailored:&lt;br&gt;• home-based education, for women (about screening) and for patients and their families (about cancer journey)&lt;br&gt;• individual counselling&lt;br&gt;• community-based education and discussion&lt;br&gt;• coaching for patients (including telephone calls)&lt;br&gt;• family-based support&lt;br&gt;• cervical screening.&lt;br&gt;Employ community-based and clinic-based navigators to liaise with each other.</td>
</tr>
</tbody>
</table>
## Strategy

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Description</th>
<th>Cancer Care Examples</th>
</tr>
</thead>
<tbody>
<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>Conduct provider-directed training (e.g., cultural sensitivity, communication) on its own or combined with reminders. Provide navigators will training and networking opportunities. Provide Indigenous health professionals with training to improve knowledge of common cancers. Provide multicomponent physician screening education, including screening training. Provide chart-based reminders to health practitioners. Provide oncologists with training on culturally responsive communication with patients and their families. Provide cancer patients and survivors with training about pain management.</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>Involve local community and tribes. Enable communities to have input into the design and evaluation of programmes. Improve registration and appointment processes. Undertake case management of patients to improve patient monitoring and follow-up. Provide structured counselling and navigation assist patients with diagnostic resolution and treatment. Conduct needs assessments with patients following treatment. Include spirituality and social support in cancer survivor programmes.</td>
</tr>
<tr>
<td><strong>Health system</strong></td>
<td>The health system can respond through funding formulas and strategies that reduce the barriers imposed by patient financial resource limitations.</td>
<td>Provide financial (reducing the cost) and logistical (provision of transportation) that support that facilitates access to screening services for low-income clients. Build tribal capacity to deliver education programmes. Conduct national communication campaigns about screening.</td>
</tr>
</tbody>
</table>

### Source
Inspired by Chin, et al. (2012: 996, Table 3)
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 most common cancer registration between 2004 and 2006 for Māori women was breast cancer, and lung cancer for Māori men.1 Lung cancer was the leading cause of cancer death for Māori men and women during the same period (Ministry of Health, 2010). While Māori adults have a higher rate of diagnosis of cancer than non-Māori (19 percent higher than the non-Māori rate), their risk of dying from cancer is substantially higher still (78 percent higher risk of death from cancer compared to non-Māori) (Robson et al, 2010). Robson et al. (2010: 42) found that between 1996-2006 the relative risk of Māori dying from cancer after diagnosis was between 24 percent (lung and stomach cancers) to 103 percent (prostate cancer) higher than for non-Māori. Apart from uterine and stomach cancer survival, a considerable portion (22-41 percent) of this outcome disparity was accounted for by differential stage at diagnosis. However adjusting for this still left Māori with a significant relative risk of cancer mortality. Priest and colleagues (2010) reported a similar finding for cervical cancer, when age and stage of diagnosis were accounted for. They concluded that, ‘...attention to diagnostic and follow-up services to ensure that they are accessible and acceptable to Māori women will be necessary to reduce disparities in cervical cancer incidence and mortality’ (Priest et al 2010: 214).

Further analysis of cancer disparities led Robson et al. (2010: 47) to conclude that ‘the higher exposure of Māori to neighbourhood deprivation contributes to the disparities between Māori and non-Māori in cancer incidence, mortality, stage at diagnosis, and survival’. McKenzie, Ellison-Lochmann and Jeffreys (2011) also found that deprivation and differential access to care were the key causes of ethnic disparities in breast cancer survival. The importance of access to cancer care was highlighted in the review of lung cancer management in Auckland and Northland in 2004. Stevens et al. (2008) found that Māori lung cancer patients were significantly less likely than European patients to receive curative treatment. The treatment of Māori patients was also less timely than European patients. These differences persisted even when small area deprivation, age, sex, stage at diagnosis, co-morbidity were controlled for. Hill and colleagues (2010) reported similar findings for the management of colon cancer.

Improving Māori access to cancer services and reducing health care disparities therefore has the potential to reduce Māori cancer morbidity and mortality (Priest et al., 2010; Stevens et al., 2008). Access relates to the cancer continuum of care and includes the availability, utility, appropriateness and quality of services (e.g., Hunter, 2008), as well as ‘in-system access’; that is, access to higher levels of care for those who have already gained entry to the health care system (Gulliford, 2009).

This report examines literature on how to successfully intervene to make cancer health care services more accessible for Māori through a focus on interventions that have worked for Māori and other Indigenous and ethnic minority peoples. The section begins with an overview of the strategic context for cancer care in Aotearoa New Zealand, followed by an examination of access barriers to cancer services for Māori. This is followed by a review and discussion of interventions to improve access.

3.1 Current Approaches to Reducing Cancer Disparities

In 2003 the New Zealand Cancer Control Strategy (Ministry of Health, 2003) highlighted that although cancer was the leading cause of death in New Zealand, one third of cancer was preventable or amenable to early detection, and a further third could be effectively treated. Cancer control is a planned, systematic and organised approach that aims to reduce the number of people diagnosed with and dying from cancer, as well as improving the quality of life for those who develop cancer (Ministry of Health 2003: 5). Cancer control involves an alliance of governmental and non-governmental service providers, making more effective and efficient use of existing resources. The overall purpose of the Strategy is to ‘reduce the incidence and impact of cancer’, and reduce inequalities with respect to cancer’ (p.1). The Strategy seeks to be consistent with Māori needs and expectations through acknowledging the Treaty of Waitangi, recommending actions to reduce Māori-non-Māori inequalities, and incorporating Māori concepts of hauora (health), whānau (family) and whānau ora (family wellness) (Ministry of Health 2003: 7).

1 The main reviews of cancer statistics (Ministry of Health, 2010a; Robson et al., 2006, 2010) do not look specifically at Māori children and young people. Craig and colleagues (2012: 41) reported that ‘during 2003-2007, cancers of the bone and cartilage were the leading cause of cancer mortality in Māori children and young people, followed by acute lymphoblastic leukaemia’. More than half (58.9%) of the cancer notifications for this time period were for carcinoma in situ of the cervix (pre-cancers), followed by acute lymphoblastic leukaemia, and cancers of the testis. Notification rates for carcinoma in situ of the cervix were significantly lower for Māori compared to non-Māori non-Pacific children and young people.
In 2004 the Minister of Health established Cancer Control New Zealand under section 11 of the New Zealand Public Health and Disability Act 2000. The Council is responsible for making sure New Zealand’s Cancer Control Strategy is implemented, including the provision of independent advice to the Ministry of Health on ‘initiatives to reduce inequalities in access to cancer services due to ethnicity’ (Cancer Control New Zealand 2012). In 2005 the Cancer Control Strategy Action Plan was published, and stated that ‘cancer services need to address health inequalities... particularly for Māori as they experience persistently worse cancer outcomes’ (Ministry of Health 2005: 3). Part of the Action Plan was the establishment of regional networks that would formally recognise the activities being undertaken through the informal collaboration of health providers and other agencies. These Regional Cancer Networks have had mixed success in engaging with Māori, even though the importance of this engagement at all levels is identified as important in the Crown Funding Agreement (CFA) for the Networks’ funding (Herbert and Peel 2010).

In 2011 the Ministry of Health’s Briefing to the Incoming Minister of Health (BIM) (2011: vi) acknowledged the ‘substantial differences in health outcomes’ for Māori, alongside the increasing burden of long-term health conditions such as cancer and cardiovascular disease on New Zealand’s ageing population. The BIM reported improvements in access to cancer services in 2010/11, particularly the health target of the reduction of waiting times for cancer treatment (Ministry of Health 2013). The BIM also spoke of 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. Fundamental to the reduction of Māori disparities was 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 2011: vii). In 2011/12 the Ministry required each district health board (DHB) to produce a Māori health plan addressing nine national health issues. Cancer was included as one of the nine national health priorities to be addressed in these plans, with indicators relating to the coverage of breast and cervical screening for Māori women (Office of the Auditor-General 2012).

The Ministry’s Statement of Intent (SoI) reiterates the Ministry’s commitment to working collaboratively across government, and with communities (via the 2011 Kia Tūtahi/Standing Together Relationship Accord, and the Office for the Community and Voluntary Sector) (Ministry of Health 2013). The terminology of ‘integrated care’ within the SoI aligns with the, perhaps wider, brief of cancer control outlined in the 2003 New Zealand Cancer Control Strategy (Ministry of Health 2003). The health targets for 2013-2016 include ‘shorter waits for cancer treatment’, with the target being ‘All patients, ready-for-treatment, wait less than four weeks for radiotherapy or chemotherapy’ (Ministry of Health 2013: 12). The SoI also prioritises cancer screening, and generally better access to cancer services.

There is good strategic and policy recognition of the need to reduce Māori health care cancer disparities as key to the Treaty relationship between the Crown and Māori. The Ministry’s SoI and BIM, combined with the influence exerted through the DHB Māori health plans, are a good platform for improving Māori access to cancer services, and the reduction of Māori cancer morbidity and mortality.

3.2 Barriers of Māori Access to Cancer Care

Research has highlighted the barriers to Māori accessing cancer-screening programmes that would pick up cancer at early stages of disease progression. For example, qualitative research conducted by the Health Sponsorship Council (HSC) in conjunction with the Cervical Screening Campaign offered insight into the personal barriers to cervical screening for Māori and Pasifika women (HSC 2012).

• Lack of awareness of the programme and cervical cancer generally.
• Embarrassment, lack of discussion and lack of ways of talking about the issue.
• Perception that clinics were difficult to access and inconvenient.
• Worry about a painful procedure.
• Worry about the cost, because most women are required to pay a surcharge.
• Competition for their time. This was a key issue that prevented women from being screened.

Beutow, Janes, Steed, Ihimaera and Elley (2007) conducted in-depth interviews with five Māori (and one non-Māori) women who were overdue for a cervical screen. The Māori women’s responses indicated barriers related to not having access to a female smear taker, there being no place they could clean themselves prior to the smear, reticence related to age and body size, fear about the results, and the lack of care and dignity they felt during the process. In their implications for practice the researchers write that the administration of cervical smears ‘...must respect and protect the personhood and dignity of women receiving a smear, aiding their growth as human beings. It should be liberating for these women by enhancing their ability to exercise some control over their health and health care’ (Beutow et al 2010: 849).
In addition to practical difficulties (e.g., transport, inconvenience, travel time), one in five women in a mid-1990s study expressed their fear of the breast screening procedure (McNoe et al., 1996). Thomson, Crengle and Lawrenson (2009) identified factors affecting mammography participation rates among a largely Māori cohort of rural women. These included: lack of information, limited involvement of the primary health care service in the screening process, incomplete registration of eligible women, unreliable mail service, problems with appointment booking system, transportation, and delayed follow-up.

Four potential barriers to colorectal cancer screening were identified by Ptama and colleagues (2012) from their interviews with 24 Māori women and six Māori men; namely, lack of appropriate engagement, poor/rushed communication, failure to preserve modesty, and discouragement by their health professional when they sought a screening referral. The bowel screening programme pilot sought to overcome some of these potential barriers by engaging with Māori leaders and community coordinators, incorporating acceptable screening processes into the design of the programme, and culturally tailoring information (Litmus, 2013b). However Māori and Pacific peoples were under-screened in the first nine months of the pilot programme (Litmus, 2013b). Six Māori who did not take part in the bowel screening programme pilot were interviewed and offered insights into the barriers to their participation in the programme. These included finding the idea of screening embarrassing, and having more pressing health concerns (Litmus, 2013a). Strategies to overcome these barriers and increase Māori participation rates include: involving Māori in strategic decision-making about the programme, revising communications, and looking at possible revisions of the screening pathway (Litmus, 2013b).

There was consensus among the 22 health providers (Māori provider, secondary care, tertiary care) interviewed by McLeod, Cormack, Harris, Robson, Sykes and Crengle (2011) that greater awareness of cervical cancer and the screening programme was a major contributor to the reduction in Māori-non-Māori cervical cancer survival disparities between 1996 and 2006, and what they themselves were more recently observing. Providers however noted that communication difficulties still arose between health providers and Māori patients.

The introduction of school-based HPV vaccination in September 2008 as a cervical cancer prevention measure is expected to lead to a reduction in cervical cancer in the long-term. The potential barriers to the uptake of the HPV vaccine included a lack of a comprehensive Public Health Nurse database to ensure coverage of all children, and the lack of a strong national communication strategy to engage communities and stimulate desire for the vaccine (Grant et al., 2009).

As differences in patient (e.g., transportation, financial costs) and disease characteristics (e.g., stage of diagnosis) cannot fully account for the cancer survival gap between Māori and non-Māori. Hill, Sarfati, Robson and Blakely (2013) also looked beyond patient factors to differences in health-care processes (e.g., communication, health care pathways), and differences in structural and system-level factors (e.g., health service funding, location of health services). These barriers to access to cancer treatment for Māori women include the culture of the health organisation (including the perception of low support for Māori women and their whānau, and non-follow-up of did-not-attends (DNAs)) (McLeod et al., 2011). Health providers who were interviewed in a study by Cormack et al. (2005) identified the lack of capacity of mainstream services to provide whānau-based services and support as a barrier to Māori accessing cancer services. They also identified the lack of cultural competent health professionals, and the (non) proximity of services as barriers to Māori accessing intensive cancer assessment and treatment services. They concluded that there was a ‘lack of comprehensive interventions, current or planned, to specifically address Māori access to cancer services’ (Cormack et al., 2005: iv).

In their qualitative study of Māori affected by cancer Walker and colleagues (2008) found that participants had had both positive (e.g., good communication) and negative experiences (e.g., lack of information and support) with health professionals. ‘Participants valued competence, compassion, warmth, honesty, respect, and professionals who offered support and took an interest in them, meeting them halfway in terms of cultural needs’ (Walker et al., 2008: 31). Whānau support was also important for participants, as were the holistic Māori cultural components of their health care (e.g., mirimiri, rongoā) that took into account wairua (spirituality), whakapapa (genealogy), and whakawhanaungatanga (relating to others). The participants suggested a range of improvements to make the health system more accessible for Māori with cancer, including patient support and navigation, coordinated and

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2 The first cancer preventing vaccine in New Zealand was the HepB vaccine that prevents hepatocellar carcinoma (Grant, et al., 2009).

3 Hypotheses about access barriers for Māori whānau to child cancer services can be drawn from recent research in the United States. Bhatia (2011) posits four possible reasons for childhood cancer survival rates improving overall, but ethnic and racial disparities remaining in overall and event-free survival outcomes from contemporary, risk-based therapy. These are parents’ lack of knowledge about diagnosis, treatment and late toxicities; lack of surveillance for long-term toxicities; risky health behaviour; and pharmacogenetics and late treatment-related outcomes.
cultur​ely responsive service delivery (including a culturally competent workforce), and the provision of information and education.

Several informants interviewed by Cormack et al. (2005) suggested strategies to intervene in the cancer health care disparities experienced by Māori, including the provision of a navigation service to assist Māori accessing cancer treatment, the provision of whānau-based services, workforce responsiveness and competence, and the development of more effective relationships and communication with Māori patients and their whānau. It was also suggested that geographical barriers to access could be addressed through community-based and outreach cancer services (Cormack et al 2005).

Hill and colleagues (2013) describe cancer care pathways as complex so that Maori are not necessarily disadvantaged at one step but rather suffer from accumulated disadvantage as they journey through the health care system and experience waits, delays and differential treatments. The authors posit that this may be because of stereotyping and discrimination, and communication difficulties. At a systems-level Maori may be disadvantaged by the centralised locations of many cancer services and associated care costs (e.g., a parent who must give up work to care for a child with cancer), as well as by mainstream health provision in which Maori are under-represented among health care professionals.

Research over the past 10 years has produced reasonably consistent results about the barriers to Māori accessing cancer screening and treatment services, and recommendations for reducing these barriers. Greater awareness and education of Māori about screening has demonstrated its potential within cervical screening for Māori access to be improved. Māori also want to know that the health care facility they attend is for them. This is demonstrated through the culturally responsive care and respect with which health care providers engage with them and their whānau, culturally-tailored information and education resources, and the presence of Māori staff. While support and navigation services may assist the cancer journey of Māori, they need to be complemented by organisational changes to more culturally responsive and coordinated service delivery. Given this context for improving Māori access to cancer services the next section seeks out interventions that have worked to improve access for Māori, Indigenous and ethnic minority peoples.
4 Interventions to Improve Access to Cancer Services

4.1 Overview

The present review looked at phases 2 through 5 of the cancer continuum of care.

1. Prevention
2. Screening
3. Early detection and management
4. Intensive assessment, effective diagnosis, and treatment
5. 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 individual risk factors and behaviours (e.g., smoking, diet) related to the primary prevention of cancer. The focus is on improving access to health care during screening, diagnosis, treatment and care. The review did not include initiatives to improve data, or build research and evaluation capacity although the importance of both are noted (CSDH 2008). (See Appendix A for the review method.)

4.2 Screening Interventions

The interventions detailed in the reviews and studies were classified as being of seven types: patient resource (e.g., transportation), low intensity (e.g., letters, calendars), education, navigation, workforce, organisational, and mass media (see Table 2 for an overview). Each of these is examined below.

4.2.1 Patient Resource Interventions

From the reviews and meta-analyses, Masi, Blackman and Peek (2007) found that interventions that addressed financial (cost) and logistical (transportation) barriers to breast screening were more effective than reminder-based interventions. Han and colleagues (2009) found that the most effective interventions at promoting mammography among ethnic minority women were those that enhanced access (e.g., reduced cost, transportation). Han and colleagues (2011) also conducted a meta-analysis of interventions to increase Pap testing among ethnic minority women in the United States. Access-enhancing interventions were again found to be the most effective, increasing Pap tests by 25.3 percent.

4.2.2 Low Intensity Interventions

The most common strategy that health care providers reported they used to increase mammography rates in underserved women were client reminders (Lobb et al 2011). From the reviews and meta-analyses, Masi, Blackman and Peek (2007) found that patient-only low intensity interventions (reminder letters, telephone counselling) were generally not effective for increasing breast cancer screening rates among Black women, with the authors attributing this to the lower income and educational attainment of the participating women (rather than them being Black per se). From their review of prostate screening interventions Sajid, Kotwal and Dale (2012) reported low improvements in decision-making (knowledge) from print, videotape/DVD and web-based interventions. Glick, Clarke, Blanchard and Whitaker (2012) reported that the findings for the effectiveness of single, educational interventions (e.g., letter, video) to improve cervical screening were inconsistent, and the strength of the effectiveness of the other single interventions was deemed insufficient.

A low-intensity intervention, a message calendar with reminders, was no more successful than a plain calendar at increasing any cancer-related prevention outcomes for patients at an urban American Indian clinic (Doorenbos et al 2011). Katz et al. (2012) write that colorectal cancer screening rates in minority populations have been increased through the use of brochures, letters, videos/DVDs, discussions, telephone calls, or patient navigation. These interventions have not, however, improved screening rates for minority populations to anywhere near close to screening rates for breast and cervical cancers. Moralez et al. (2012) argue that this will not happen until the prevailing knowledge about, and barriers to screening for these communities are fully understood. Findings from the systematic review of community-based trials by Morrow, Dallo and Julka (2010) confirmed this; namely, that the common features of successful trials were the conveying of patient choice (e.g., a menu of screening options) and the provision of tailored information. The only study in their review to demonstrate the efficacy of a low-intensity intervention was one that explored and then took into account potential barriers for patients (e.g., embarrassment) when tailoring website information and screening options (Ruffin et al 2007).
### Table 2. Interventions to reduce disparities in access to cancer screening

<table>
<thead>
<tr>
<th>Ref</th>
<th>Cancer</th>
<th>Loc</th>
<th>Eth</th>
<th>Continuum</th>
<th>Intervention(s)</th>
<th>Design</th>
<th>Control</th>
<th>n, Duration</th>
<th>Outcome(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glick et al. 2012 – REVIEW</td>
<td>Cervical</td>
<td>USA</td>
<td>EM</td>
<td>Screening</td>
<td>Diagnosis, Treatment</td>
<td>Systematic review</td>
<td></td>
<td></td>
<td>Moderate evidence that telephone support with navigation increases cervical screening. Low evidence that lay health educators providing education and navigation increase screening for HS, CA, and VA.</td>
</tr>
<tr>
<td>Han et al. 2007 – META-ANALYSIS</td>
<td>Breast</td>
<td>USA</td>
<td>AA, HS, Asian</td>
<td>Screening</td>
<td>Review - 23 studies published September 2000 to August 2008</td>
<td>Meta-analysis</td>
<td></td>
<td></td>
<td>Interventions were effective at improving screening rates. Access-enhancing interventions were most effective, followed by education/counselling interventions. Theory-based, tailored interventions were more effective than non-tailored interventions. Ethnically- and culturally-matched interventions were effective.</td>
</tr>
<tr>
<td>Han et al. 2011 – META-ANALYSIS</td>
<td>Cervical</td>
<td>USA</td>
<td>EM</td>
<td>Screening</td>
<td>Review - 18 randomised and non-randomised controlled trials published 1984-2009</td>
<td>Meta-analysis</td>
<td></td>
<td></td>
<td>Screening rates were increased most by access-enhancing interventions (e.g., reduced-cost, transportation), followed by community education, followed by individual counselling or letters. Smallest effect size for peer navigators. Incorporating cultural strategies significantly increased screening.</td>
</tr>
<tr>
<td>Masi et al. 2007 – REVIEW</td>
<td>Breast</td>
<td>-</td>
<td>EM</td>
<td>Screening</td>
<td>Diagnosis, Treatment</td>
<td>Systematic review</td>
<td></td>
<td></td>
<td>Increased mammography rates when financial and logistical barriers reduced; and from culturally tailored educational material.</td>
</tr>
<tr>
<td>Naylor et al. 2012 – REVIEW</td>
<td>Colorec</td>
<td>USA</td>
<td>EM</td>
<td>Screening</td>
<td>Review - 33 studies published 1950-September 2010</td>
<td>Systematic review</td>
<td></td>
<td></td>
<td>Modest improvements in screening from navigation plus phone or in-person contact. Modest improvements from provider directed education sessions plus reminders, and educational interventions.</td>
</tr>
<tr>
<td>Ref</td>
<td>Cancer</td>
<td>Loc</td>
<td>Eth</td>
<td>Continuum</td>
<td>Intervention(s)</td>
<td>Design</td>
<td>Control</td>
<td>n, Duration</td>
<td>Outcome(s)</td>
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<tr>
<td>Sajid et al. 2012 – REVIEW</td>
<td>Prostate</td>
<td>USA</td>
<td>EM</td>
<td>Screening, Survivor QoL</td>
<td>Review - 19 studies published from 1985-2010</td>
<td>Systematic review</td>
<td></td>
<td></td>
<td>Modest improvements in decision-making (knowledge) about screening from educational programmes. Low improvements in decision-making from print, videotape/DVD and web-based interventions. QoL of men being treated for prostate cancer improved by cognitive-behavioural interventions that enhanced problem-solving and coping skills.</td>
</tr>
<tr>
<td>Christopher et al. 2008</td>
<td>Cervical</td>
<td>USA</td>
<td>Al</td>
<td>Screening</td>
<td>Education - lay health advisors trained to increase awareness of cervical cancer prevention</td>
<td>Pre-post</td>
<td>n=83</td>
<td></td>
<td>Gains in knowledge, comfort, and programme awareness.</td>
</tr>
<tr>
<td>Ka'opua et al. 2011 - PILOT</td>
<td>Breast</td>
<td>USA</td>
<td>HW</td>
<td>Screening</td>
<td>Education - Church-based culturally-tailored education</td>
<td>RT</td>
<td>Waiting</td>
<td>n=198 women, 12 churches</td>
<td>Improved awareness and intention to seek yearly mammogram from treatment</td>
</tr>
<tr>
<td>Katz et al. 2008</td>
<td>Breast</td>
<td>USA</td>
<td>AN,AA, WA</td>
<td>Screening</td>
<td>Education - delivered by lay health advisor in rural communities</td>
<td>RCT</td>
<td>Physician letter and brochure</td>
<td>n=851</td>
<td>Intervention group twice as likely to receive mammogram, have better belief scores, and reduced barriers.</td>
</tr>
<tr>
<td>Katz et al. 2012</td>
<td>Colorec</td>
<td>USA</td>
<td>AA</td>
<td>Screening</td>
<td>Education - patient activation plus screening information and barriers counselling</td>
<td>RCT</td>
<td>Information only</td>
<td>n=270, 72% AA</td>
<td>Intervention patients were more likely to complete a screening test; discuss screening with their health care provider; and have more screening tests ordered.</td>
</tr>
<tr>
<td>Mishra et al. 2009</td>
<td>Cervical</td>
<td>USA</td>
<td>AS</td>
<td>Screening</td>
<td>Education - culturally tailored cervical cancer education</td>
<td>Pre-post</td>
<td>Usual care</td>
<td>n=398, 3 weekly sessions</td>
<td>Intervention group twice as likely to self-report Pap smear use</td>
</tr>
<tr>
<td>Moralez et al. 2012</td>
<td>Colorec</td>
<td>USA</td>
<td>HS</td>
<td>Screening</td>
<td>Education - promotoras-led home-based education to improve knowledge and screening</td>
<td>Pre-post</td>
<td>n=252 attended at least one of 50 sessions</td>
<td></td>
<td>Increased knowledge of cancer and participation in colorectal cancer screening.</td>
</tr>
<tr>
<td>Ref</td>
<td>Cancer</td>
<td>Loc</td>
<td>Eth</td>
<td>Continuum</td>
<td>Intervention(s)</td>
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<tr>
<td>O’Brien et al. 2010</td>
<td>Cervical</td>
<td>USA</td>
<td>HS</td>
<td>Screening</td>
<td>Education - <em>promotoras-led community education</em></td>
<td>RT</td>
<td>Usual care, weighing control</td>
<td><em>n=120</em></td>
<td>Significant improvements in screening, knowledge, and self-efficacy.</td>
</tr>
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<td></td>
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<td></td>
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<td></td>
<td>Cervical cancer knowledge and intervention group assignment associated with screening.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Russell et al. 2010</td>
<td>Breast</td>
<td>USA</td>
<td>AA</td>
<td>Screening</td>
<td>Education - computer instruction plus lay health advisor counselling</td>
<td>RT</td>
<td>Pamphlet only</td>
<td><em>n=181</em></td>
<td>Intervention group three times more likely than control group to be screened at 6 months.</td>
</tr>
<tr>
<td>Subrahmanian et al.</td>
<td>General</td>
<td>USA</td>
<td>AI</td>
<td>Screening</td>
<td>Education - community education to improve screening knowledge</td>
<td>Pre-post</td>
<td>n=359, 1 day workshop</td>
<td></td>
<td>Significant improvements in cancer-related screening knowledge. Participant consent for a follow-up study of screening behaviour.</td>
</tr>
<tr>
<td>v. Friederichs-Fitzwater et al. 2010</td>
<td>Breast</td>
<td>USA</td>
<td>AI, AN</td>
<td>Screening</td>
<td>Education - culturally tailored breast cancer education: DVD and talking circle discussions</td>
<td>Pre-post</td>
<td>n=161</td>
<td></td>
<td>Significant increase in breast health knowledge, and understanding of prognosis and treatment. Significant increase in intention to get a mammogram, especially for those who had had a recent mammogram, and those with increased knowledge. Significant association between intention and actual receipt of mammogram within one year.</td>
</tr>
<tr>
<td>Doorenbos et al. 2011</td>
<td>General: breast colorectal lung prostate</td>
<td>USA</td>
<td>AI, AN</td>
<td>Screening</td>
<td>Messaging - culturally-tailored calendar with screening information and reminders</td>
<td>RCT</td>
<td>Usual calendar</td>
<td><em>n=5633</em></td>
<td>No difference in increased receipt of any cancer-related prevention outcome between intervention and control groups.</td>
</tr>
<tr>
<td>Clark et al. 2011</td>
<td>Breast</td>
<td>USA</td>
<td>AA</td>
<td>Screening &amp; follow-up</td>
<td>Navigation - case management of screening and follow-up navigation, and social service referrals</td>
<td>Trend analysis</td>
<td>n=732</td>
<td></td>
<td>Increased achievement of regular screening only among women with a recent smear pre-intervention. Social support for childcare important for regular screening among women without a recent smear pre-intervention.</td>
</tr>
<tr>
<td>Burhanssitpanov et al. 2010</td>
<td>Breast</td>
<td>USA</td>
<td>AA, HS, NA, WA</td>
<td>Screening</td>
<td>Navigation - culturally modified patient navigator programmes (face-to-face &amp; phone)</td>
<td>Pre-post</td>
<td>n=113</td>
<td></td>
<td>Navigation effective in increasing adherence to mammography rescreening recommendations.</td>
</tr>
<tr>
<td>Christie et al. 2008 - PILOT</td>
<td>Colorec</td>
<td>USA</td>
<td>HP, AA</td>
<td>Screening</td>
<td>Navigation - patient navigator educating, reminding, &amp; assisting</td>
<td>RCT</td>
<td>Usual care</td>
<td><em>n=21, 71% H, 21% AA</em></td>
<td>Significantly more navigated than non-navigated patients completed screening colonoscopy (54% vs. 13%).</td>
</tr>
</tbody>
</table>
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<table>
<thead>
<tr>
<th>Ref</th>
<th>Cancer</th>
<th>Loc</th>
<th>Eth</th>
<th>Continuum</th>
<th>Intervention(s)</th>
<th>Design</th>
<th>Control</th>
<th>n, Duration</th>
<th>Outcome(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gorin et al. 2006</td>
<td>Breast</td>
<td>USA</td>
<td>AA,HP</td>
<td>Screening</td>
<td>Workforce - multicomponent physician-directed education tailored to physicians’ barriers to screening</td>
<td>RT</td>
<td>Usual care</td>
<td>n=186</td>
<td>Significant intervention effect on recommendations of mammography and clinical breast examinations.</td>
</tr>
<tr>
<td>Panaretto et al. 2006</td>
<td>Cervical</td>
<td>Austr alia</td>
<td>AU</td>
<td>Screening</td>
<td>Workforce - Aboriginal Health Worker trained to advocate for, and perform Pap smears</td>
<td>PS</td>
<td>n=198</td>
<td>Pap smear participation increased 70%.</td>
<td></td>
</tr>
<tr>
<td>Xirasagar et al. 2011</td>
<td>Colorec</td>
<td>USA</td>
<td>AA</td>
<td>Screening</td>
<td>Workforce - training AA primary health care physicians to perform colonoscopy</td>
<td>Purposive sample Un-trained</td>
<td>n=12</td>
<td>Training of AA primary care providers had significant positive impact on AA patient screening rates.</td>
<td></td>
</tr>
<tr>
<td>Lobb et al. 2011</td>
<td>Breast</td>
<td>USA</td>
<td>EM</td>
<td>Screening</td>
<td>Providers - survey of strategies to promote mammography among medically underserved women</td>
<td>Survey</td>
<td>n=86 organisations</td>
<td>Group education and client reminders were the most common strategies.</td>
<td></td>
</tr>
<tr>
<td>Thomson et al. 2009</td>
<td>Breast</td>
<td>NZ</td>
<td>Māori</td>
<td>Screening</td>
<td>Provider – community outreach and rural primary health care service reorganisation</td>
<td>Retrospective evaluation</td>
<td>One practice</td>
<td>Improved provision of information and identification of eligible women. Improved registration and appointment process. Increase from 45% to 99% participation of Māori women in breast screening.</td>
<td></td>
</tr>
<tr>
<td>National Screening Unit 2012a</td>
<td>Breast</td>
<td>NZ</td>
<td>Māori Pacific</td>
<td>Screening</td>
<td>Mass media – communication campaign</td>
<td>Campaign reported to have ‘worked extremely well’.</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

**Note.** AA=African American; AI=American Indian; AN=Alaska Native; AS=American Samoan; AU=Australian Aborigine; CA=Chinese American; EM=Minority; Eth=Ethnicity; HP=Hispanic; HW=Hawaiian; Loc=location; n=number; QoL=Quality of Life; PS=Prospective Study; RCT=Randomised Control Trial; Ref=Reference; RT=Randomised Trial; VA=Vietnamese American; WA=White American
4.2.3 Education Interventions

Masi, Blackman and Peek (2007) found that the use of culturally tailored educational material (e.g., waiting room videos, small group education) was effective at increasing mammography rates. From their meta-analyses of interventions to improve cervical cancer screening, Glick, Clarke, Blanchard and Whitaker (2012) found some evidence from the five studies included in their review for the effectiveness of lay health worker delivery of education materials combined with navigation. They conclude that

‘For clinicians, administrators, policy makers and others striving to improve the rate of screening for cervical cancer in minority populations, telephone support with navigation and education programs by lay health educators with navigation may be of benefit’ (Glick et al 2012: 1031).

From their meta-analysis Han and colleagues (2011) reported that Pap tests increased by 16.7 percent with community education, and 13.2 percent with individual counselling. In addition, the incorporation of ‘cultural strategies, especially multiple strategies, significantly improved cervical cancer screening among ethnic minority women’ (Han et al 2011: 349). From their review of prostate screening interventions Sajid, Kotwal and Dale (2012) reported modest improvements in decision-making (knowledge) from educational programmes. Han and colleagues (2009) attributed a small negative effect associated with the use of social network interventions (e.g., lay health advisors) to improve mammography rates to the studies reviewed being non-randomised, community-based trials. This led them to suggest that these interventions might ‘be better suited for smaller community applications’ (p. 251).

Eleven of the intervention studies included in this review focused on education interventions to improve access to cancer screening. The interventions were a mix of education (home-based, community-based, provider based), computer instruction, DVD, patient activation, talking circles, and/or screening information. The interventions, often delivered by a lay health advisor/promotoras and often explicitly culturally-tailored, increased participants’ knowledge about and awareness of screening and, when included as an outcome, participants’ completion of a screening test. For example, computer education followed by regular lay health advisor counselling increased mammography screening among African American women (Russell et al 2010).

The provision of a culturally tailored screening educational programme that is inclusive of cultural strengths, including spirituality and family, has been explored in Hawai’i (Ka'opua et al 2011). The women in the intervention group exhibited improved awareness and greater intent to seek yearly mammograms. Mishra and colleagues tested two culturally appropriate educational programmes aimed at increasing screening among Samoan women. The first programme, included in Han et al.’s (2009) meta-analysis, increased knowledge about breast screening among Samoan women in California but not self-reported mammography (Mishra et al 2007). The second programme significantly increased the rate of self-reported Pap smears among Samoan women in American Samoa (Mishra et al 2009). The authors noted that for this second programme ‘It is quite possible that either the church ministers’ wives or leaders of the women’s groups in the churches reinforced the education program’s emphasis on positive behaviour change’ (97).

Subrahmanian and colleagues (2011) found that culturally appropriate education within American Indian communities increased participants’ cancer screening-related knowledge. An educational programme delivered by a lay health advisor increased mammography rates among rural women (Native American, African American, and White) in the United States (Katz et al 2008). The women in the intervention group had significantly better belief scores and reduced barriers to mammography at follow-up, compared to women in the control group. Home-based education led by promotoras also increased knowledge and screening (Moralez et al 2012). As part of a Community-Based Participatory Research project Messengers for Health (lay health advisors) were trained to ‘generate knowledge and awareness about cervical cancer prevention…in a culturally competent manner’ among Apsáaalooke women (Northern Plains Native Americans) (Christopher et al 2008). The research found that those assisted by the Messengers displayed knowledge gains, increased comfort discussing cancer and awareness of cervical cancer. Promotoras-led education led to increased knowledge about cervical cancer, and increased screening among Hispanic women. Women in the intervention, whose knowledge increased, were most likely to obtain a screening test following the intervention (O’Brien et al 2010).

von Friederichs-Fitzwater, Navarro and Taylor (2010) found that women who had had a mammogram in the past year, and those whose knowledge increased as a result of the intervention were most likely to signal their intention to get a mammogram following the intervention. There was also a strong association between women’s intention and actual receipt of a mammogram within the 12 months following the intervention. Katz, Fisher, Fleming and Paskett (2012), however, found that although their activation (video, screening information, barriers counselling) intervention increased participants’ discussion of colorectal cancer screening this, in turn, did not guarantee that the next screening step would be taken.
4.2.4 Navigation

Navigator programmes are designed to 'provide individualised assistance to patients and family members to overcome barriers, promoting early diagnosis and timely and complete treatment' (Braun et al 2008: 329). In their review Glick, Clarke, Blanchard and Whitaker (2012) reported that the strength of the evidence was moderate for telephone support combined with navigation increasing the rate of screening for cervical cancer. Naylor, Ward and Polite (2012) found that modest improvements in colorectal cancer screening rates were achieved from patient education (in person or by phone) combined with navigation.

Four interventions looked specifically at patient navigator interventions. These were effective at increasing screening colonoscopy rates to over 50 percent among largely low income Hispanic and African American clients (compared to 13 percent among non-navigated clients) (Christie et al 2008), and increasing the rate of regular cervical screening among women who had had a recent smear prior to the intervention. For those women who had not had a recent smear, childcare support was important to enabling them to achieve regular smears (Clark et al 2011). Patient navigators also increased women's adherence to mammography re-screening recommendations (Burhansstipanov et al 2010).

4.2.5 Workforce Interventions

From the reviews and meta-analyses, Naylor, Ward and Polite (2012) found that provider-directed education sessions (e.g., up skilling doctors for communication with patients with low health literacy) – either as the sole intervention or combined with reminders – increased colorectal cancer screening rates for ethnic minorities. Masi et al. (2007) found that cultural sensitivity training for nurse practitioners increased mammography rates among Native American and Southeast Asian women.

When Aboriginal Health Workers were trained to advocate for and perform cervical smears opportunistic screening of women increased the rate of Pap smears by 70 percent at an Aboriginal and Torres Strait Islander Health Service in Townsville, Australia (Panaretto et al 2006). The initiative also included promotional material at the clinic and promotion on the local Indigenous radio.

Multi-component, physician-directed education in South Bronx significantly increased the physicians’ recommendations of mammography and clinical breast cancer examination for their female patients who were over 40 years of age (Gorin et al 2006). This intervention included brief face-to-face interactions tailored to address the individual physicians barriers to screening, as well as six dinner seminars and a newsletter. African American primary care physicians trained in screening colonoscopy were an effective intervention for increasing African American patients’ screening rates (Xirasagar et al 2011).

4.2.6 Organisational interventions

From the reviews and meta-analyses, Masi, Blackman and Peek (2007) found that chart-based reminders (e.g., a reminder about a patient’s screening status) were effective service interventions that increased health care provider delivery, particularly for lower socio-economic patients. Multifaceted interventions were also successful; for example, chart reminders, patient education materials and partially completed mammogram requisitions. Three of the combined patient-provider interventions reviewed by Masi et al. (2007) were not successful. Their lack of success was attributed to unstable medical director leadership at clinics, physician turnover, and an emphasis on urgent as opposed to preventative care. The three provider only interventions reviewed by Masi et al. (2007) were successful at increasing physician adherence to mammography screening guidelines. All highlighted health provider time pressures and the potential assistance of clerical support.

A rural general practice with a predominantly Māori population used different strategies to increase participation in breast screening from 45 percent in 2003, to around 98 percent in both 2005 and 2007 (Thomson et al 2009). The strategies included increased local involvement (e.g., promotion, identification of eligible women, improved registration and appointment process), and reducing barriers to participation (e.g., community advocacy, active promotion by the general practice, involvement of the local Iwi (tribal) authority).

4.2.7 Mass Media

A communication campaign launched by the National Screening Unit in September 2007 targeting Māori and Pasifika women and encouraging them to have a cervical smear has resulted in a ‘slow but steady’ increase in participation (Lewis et al 2009: 23). The key actors in the campaign were Māori and Pasifika women, and the campaign included messages about women being ‘there for your whānau in the future’. The Māori television advertisements were produced in both English and te reo Māori (the Māori language) (National Screening Unit 2012b). The campaign has been implemented in three phases: start conversations, motivate women to be
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screened, and further approaches (HSC 2012). The regional public campaign launched in 2007 by BreastScreen Aotearoa also targets Māori and Pasifika women, encouraging 45-69 year old women to go for breast screening every two years. Men are also encouraged to look after the women in their lives. This campaign is reported to have ‘worked extremely well’ (National Screening Unit 2012a).

4.2.8 Summary

Reducing financial and logistical barriers increases screening rates among minority women. Once these barriers are removed the provision of tailored information, including information about screening choices, are effective at improving screening rates. Low intensity interventions are not effective at increasing breast and cervical screening among women, but have been successful at improving colorectal screening rates during the early days of colorectal screening programmes. The inclusion of navigation or community health worker services to educational programmes increases screening rates as it allows for the cultural tailoring of the information provided to participants. Increasing people’s knowledge of screening has been linked with increased attendance at screening. Provider directed education, including cultural competence training, increases screening of minority patients. Within a clinic setting multifaceted interventions increase screening rates, although the success of interventions can be placed at risk by instability in clinic leadership or workforce. A staged approach to mass media campaigns about screening has facilitated increased cervical screening rates in New Zealand.

4.3 Early Detection & Management Interventions

The interventions detailed in the reviews and studies were classified as being of two types: diagnostic and workforce (see Table 3 for an overview). Each of these is examined below.

4.3.1 Diagnostic Interventions

Seven of the 31 studies included by Glick et al. (2012: 1019) in their systematic review were of ‘interventions to improve the diagnosis and treatment of premalignant disease of the cervix in minority populations’ in the United States. The authors report some evidence (i.e. the strength of the evidence was low) that (i) ‘a single visit for screening for cervical cancer and follow up of an abnormal result results in improvement in the diagnosis and treatment of premalignant disease of the cervix’, or (ii) ‘telephone counseling increases the diagnosis and treatment of premalignant lesions of the cervix’ (Glick, et al 2012: 1030). Masi et al. (2007) reviewed five interventions and found that case management led to successful patient monitoring and follow-up, and diagnostic activities. They define case management as ‘a collaborative process that assesses, plans, implements, coordinates, and evaluates options and services to meet an individual’s health needs through communication and available resources’ (p.223S).

Structured counselling and patient navigation were used to improve adherence through, and timeliness of, diagnostic resolution for low income, minority women who have had an abnormal mammogram, in the United States (Ell et al 2007). Compared to the control group, the intervention group were much more likely to experience timely diagnostic adherence. Two patient navigation interventions were also successful at improving timely follow-up (Battaglia et al 2007; Ferrante et al 2007). A telephone intervention to connect with women and provide information and encouragement was, however, not effective in improving diagnostic resolution (Bastani et al 2010).

4.3.2 Workforce Interventions

Indigenous health professionals’ knowledge of common cancers among Indigenous women, identified as a priority in Western Australia, was improved by a four-day pilot course that also addressed common misconceptions (Croager et al 2010). Workforce training initiatives have also included specific navigator training. Braun and colleagues (2008) developed and trialled curriculum for navigator training that met the needs of community outreach workers located on different islands in Hawai’i. As well as enhancing the skills of participants (N=62), the training served to build networks between diverse navigators working in a variety of settings. Similarly training for American Indian and Alaska Native health professionals and community health representatives (Cancer 101) improved participants’ (N=70) knowledge and attitudes, with these improvements remaining 4-6 months post-training (Hill et al 2010). The training also had a positive impact on participants’ behavioural intentions and subsequent cancer control activities in their communities.
### Table 3. Interventions to reduce disparities in access to cancer early detection and management

<table>
<thead>
<tr>
<th>Ref</th>
<th>Cancer</th>
<th>Loc</th>
<th>Eth</th>
<th>Continuum</th>
<th>Intervention(s)</th>
<th>Design</th>
<th>Control</th>
<th>n, Duration</th>
<th>Outcome(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glick et al. 2012</td>
<td>Cervical</td>
<td>USA</td>
<td>EM</td>
<td>Screening, Diagnosis, Treatment</td>
<td>Review - 31 studies through August 2010, 7 studies focused on improving diagnosis and treatment</td>
<td>Systematic review</td>
<td>-</td>
<td></td>
<td>Low evidence that one screening visit and follow-up of an abnormal result improves diagnosis and treatment for HS. Low evidence that telephone counselling increases diagnosis and treatment for AA.</td>
</tr>
<tr>
<td>Bastani et al. 2010</td>
<td>Breast</td>
<td>USA</td>
<td>LI-HS</td>
<td>Diagnostic resolution</td>
<td>Telephone - follow-up by health professional and lay health worker</td>
<td>RT</td>
<td>Usual care</td>
<td>n=1708</td>
<td>Intervention not effective</td>
</tr>
<tr>
<td>Battaglia et al. 2006</td>
<td>Breast</td>
<td>USA</td>
<td>AA-WA-HS</td>
<td>Diagnostic resolution</td>
<td>Navigation - barrier-focused patient navigation</td>
<td>Pre-post</td>
<td>Usual care</td>
<td>n=1332</td>
<td>Significantly more timely follow-up with intervention.</td>
</tr>
<tr>
<td>Ell et al. 2007</td>
<td>Breast</td>
<td>USA</td>
<td>HP</td>
<td>Diagnostic resolution</td>
<td>Navigation - structured counselling and patient navigation driven by structured clinical algorithm</td>
<td>RCT</td>
<td>Usual care</td>
<td>n=204</td>
<td>Intervention group significantly more likely to be adherent through diagnostic resolution and to experience timely adherence.</td>
</tr>
<tr>
<td>Ferrante, Chin &amp; Kim 2007</td>
<td>Breast</td>
<td>USA</td>
<td>HS-AA</td>
<td>Diagnostic resolution</td>
<td>Navigation - patient navigation by experienced navigator</td>
<td>RCT</td>
<td>Usual care</td>
<td>n=105</td>
<td>Intervention group had shorter time to diagnostic resolution, lower anxiety, and higher satisfaction.</td>
</tr>
<tr>
<td>Croager et al. 2010</td>
<td>General</td>
<td>Australia</td>
<td>AU</td>
<td>Early detection &amp; management</td>
<td>Education - culturally relevant training in cancer control for Indigenous Health Professionals</td>
<td>Post</td>
<td></td>
<td>n=35, 3 four-day courses</td>
<td>Increased knowledge of treatment, screening and most common cancers in women at course completion, but not sustained at follow-up</td>
</tr>
<tr>
<td>Hill et al. 2010</td>
<td>General</td>
<td>USA</td>
<td>AI, AN</td>
<td>Screening, early detection, management</td>
<td>Education – health professionals and community health representatives to improve knowledge, tribal action, and survival rates</td>
<td>Pre-post</td>
<td></td>
<td>n=70, 5 2-day trainings over 17 months</td>
<td>Significant improvements in participants’ knowledge and attitudes. Positive effects on behavioural intentions and cancer control activities.</td>
</tr>
<tr>
<td>Braun et al. 2008</td>
<td>General</td>
<td>USA</td>
<td>HW</td>
<td>Management</td>
<td>Education - community outreach workers training curriculum</td>
<td>CBPR</td>
<td>Three versions</td>
<td>n=62 health workers</td>
<td>Increased knowledge and skills among trainee workers.</td>
</tr>
</tbody>
</table>

**Note:** AA=American African; AI=American Indian; AN=Alaska Native; AU=Australian Aborigine; CBPR=Community-Based Participatory Research; EM=Minority; Eth=Ethnicity; HP=Hispanic; HW=Hawaiian; LI=Low Income; Loc=location; n=number; RCT=Randomised Control Trial; Ref=Reference; WA=White American
4.4 Intensive Assessment, Effective Diagnosis, and Treatment Interventions

The interventions detailed in the studies were classified as being of five types: case management, education, family support, navigation, and workforce (see Table 4 for an overview).

4.4.1 Case Management

Masi et al. (2007) included two trials of case management interventions to improve cancer treatment. In both cases the case management involved a combination of education, counselling, advocacy, navigation / care coordination. The interventions improved treatments and outcomes for women (e.g., time to first treatment, breast-conserving surgery).

4.4.2 Education

Sanderson and colleagues (2010) developed and trialled a culturally specific video about breast cancer treatment options for Navajo women. Although the video did not result in any more involvement with support groups among the small sample of women, the women reported reduced anxiety and sought more information. The pilot of a brief psychoeducational intervention led to more rapid initiation of chemotherapy and more adherence to chemotherapy in a small sample of African American women with breast cancer (Rosenzweig et al 2011). Individualised education and coaching significantly reduced the disparity in pain control experienced by minority patients with cancer (Kalauokalani et al 2007)

4.4.3 Family Support

A pilot study of a cultural intervention to support Native Hawaiian women with cancer and their families improved the coping and self-efficacy of those in the intervention group (compared control group) (Mokuau et al 2008). Although this was a small study, it highlighted the feasibility and potential effectiveness of a culturally responsive family intervention that used multiple strategies to recruit women and their families. A pilot of culturally tailored family therapy with African American families where a parent had cancer resulted in more satisfaction and better family communication (Davey et al 2012). The researchers reported that their biggest learning from this pilot was trust building with communities so that they were able to recruit families into support programmes.

4.4.4 Navigation

Patient navigation in Hawai‘i is provided by community cancer patient navigators and hospital-based clinical patient navigators who provide social support and health service navigation, and work together in complementary ways to improve access to care, improve timeliness and completion of care, and improve patients’ feelings of confidence and control (Domingo et al 2011).

Guadagnolo and colleagues (2011) found that American Indian cancer patients had fewer days of treatment interruption when they had culturally competent navigators supporting them with their cancer therapy, communications with medical providers, travel and logistics (including insurance issues, and obtaining of medicines). One fifth of those navigated also enrolled for a clinical trial. On average patients had 12 contacts with a navigator with a median time per contact (after the initial visit) of 15 minutes, and 12 percent of the patients had only one initial visit contact. The reasons why patients were initially referred to the navigation service included: financial assistance (54%), travel and lodgings assistance (35%), psychosocial support (35%), care coordination (22%), education (20%), and/or advocacy (20%). The need for case management decreased, and requests for financial assistance and psychosocial support increased, over the first five navigation contacts made by patients.

Community Cancer Support Services Pilot Projects were funded by the Ministry of Health and ran from the end of 2008 to mid-2010 in three sites (two Māori sites in Rotorua and Auckland, and one rural site on the West Coast) (Corter et al 2011). These projects aimed to improve community, including patient, understanding of cancer and services; reduce barriers to service access and care; and reduce access and care disparities, through a combination of patient and whānau navigation and community health promotion. This initiative therefore spanned community health promotion through to secondary health and social support service provision. Service access and care was facilitated through the provision of financial support, transport assistance, food, accommodation, childcare, psychosocial and emotional support, advocacy, information, cultural support, whānau support, and support along the continuum of care. Analysis of hospital admission data demonstrated that ‘cancer support services were delivered to a larger relative proportion of Māori’ within the initiative sites (Corter et al 2011). The principles of care provision for Māori, described as Kaupapa Māori cancer support, were found to be: recognition of whakapapa and whanaungatanga connections, the value of kanohi kitea (a face being known) and the kanohi-
Table 4. Interventions to reduce disparities in access to cancer intensive assessment, effective diagnosis, and treatment

<table>
<thead>
<tr>
<th>Ref</th>
<th>Cancer</th>
<th>Loc</th>
<th>Eth</th>
<th>Continuum</th>
<th>Intervention(s)</th>
<th>Design</th>
<th>Control</th>
<th>n, Duration</th>
<th>Outcome(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kalauokalani et al. 2007</td>
<td>General USA</td>
<td>EM</td>
<td>Treatment</td>
<td>Education – individual education and coaching session</td>
<td>RCT secondary analysis</td>
<td>Usual care</td>
<td>n=67, one 20 min session</td>
<td>Pre-treatment disparity in pain control eliminated by treatment.</td>
<td></td>
</tr>
<tr>
<td>Sanderson et al. 2010 – PILOT</td>
<td>Breast</td>
<td>USA</td>
<td>AI</td>
<td>Treatment</td>
<td>Education - culturally specific video about breast cancer treatment options</td>
<td>Mixed method evaluation</td>
<td>n=14 women, 26 providers</td>
<td>Video reduced anxiety and increased interest in support groups. Information but not support groups sought out at 6 months.</td>
<td></td>
</tr>
<tr>
<td>Rosenzweig et al. 2011 – PILOT</td>
<td>Breast</td>
<td>USA</td>
<td>AA</td>
<td>Treatment</td>
<td>Education - psychosocial intervention with AA breast cancer survivor to improve treatment adherence</td>
<td>RCT</td>
<td>Usual care</td>
<td>n=24, one-time</td>
<td>Intervention participants initiated chemotherapy more quickly, and had better overall adherence to chemotherapy.</td>
</tr>
<tr>
<td>Davey et al. 2012 - PILOT</td>
<td>General</td>
<td>USA</td>
<td>AA</td>
<td>Treatment</td>
<td>Family support - cultural adaptation and evaluation of family intervention</td>
<td>RT</td>
<td>Usual care</td>
<td>n=12 parents, 19 children. 2 2-hr family therapy sessions</td>
<td>Intervention group were more satisfied and reported better family communication.</td>
</tr>
<tr>
<td>Mokuau et al. 2008 - PILOT</td>
<td>General</td>
<td>USA</td>
<td>HW</td>
<td>Treatment</td>
<td>Family support - culturally tailored support for Native Hawaiian women with cancer, and their families</td>
<td>RT</td>
<td>2 visits</td>
<td>n=ten families,6 visits, 3 month period</td>
<td>More improvement on outcome variables by intervention group, including improved self-efficacy and coping.</td>
</tr>
<tr>
<td>Domingo et al. 2011</td>
<td>General USA</td>
<td>HW WA EN</td>
<td>Screening &amp; treatment</td>
<td>Navigation - community cancer patient navigators &amp; clinical cancer patient navigators</td>
<td>CS</td>
<td>n=18</td>
<td>75% access barriers, 25% system barriers, with navigators providing six actions per case, for improved access to care, improved timeliness and care completion, and improved patient confidence and control.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corter et al. 2011</td>
<td>General NZ</td>
<td>All</td>
<td>Treatment +</td>
<td>Navigation – to improve understanding, reduce barriers, reduce access disparities</td>
<td>CS, Pre-post</td>
<td>3 sites</td>
<td>Cancer support services delivered to a larger proportion of Māori.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ref</td>
<td>Cancer</td>
<td>Loc</td>
<td>Eth</td>
<td>Continuum</td>
<td>Intervention(s)</td>
<td>Design</td>
<td>Control</td>
<td>n, Duration</td>
<td>Outcome(s)</td>
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</tr>
<tr>
<td>Guadagnolo et al. 2011</td>
<td>General</td>
<td>USA</td>
<td>AI</td>
<td>Treatment</td>
<td>Navigation - patient navigation: therapy, obtaining medication, insurance, communication, logistics</td>
<td>PC</td>
<td>Usual care</td>
<td>n=402</td>
<td>Navigated patients had less treatment interruption. One fifth of navigated patients enrolled for a clinical trial.</td>
</tr>
<tr>
<td>Quinn et al. 2011</td>
<td>General</td>
<td>USA</td>
<td></td>
<td>Management &amp; intensive treatment</td>
<td>Workforce - education to improve communication with Hispanic patients</td>
<td>Pre-post</td>
<td>n=55</td>
<td></td>
<td>Overall positive response from workshop participants with increased knowledge and increased awareness of need for communication improvement.</td>
</tr>
<tr>
<td>Haozous et al. 2012 - PILOT</td>
<td>General</td>
<td>USA</td>
<td>AI AN</td>
<td>Management &amp; intensive treatment</td>
<td>Workforce - education and case conferences among tribal clinic health care providers, about management of cancer patients' pain</td>
<td>Cross-sectional</td>
<td>Non-participants</td>
<td>N=52, monthly education, n=93, 9 case conferences</td>
<td>Increased perceived competence in pain management among case conference participants. Participants reported high satisfaction with videoconferencing.</td>
</tr>
</tbody>
</table>

Note: AA=African American; AI=American Indian; AN=Alaska Native; CS=Case Study; EM=Minority; Eth=Ethnicity; HW=Hawaiian; Loc=location; n=number; PC=Prospective Cohort; RCT=Randomised Control Trial; Ref=Reference; RT=Randomised Trial; WA=White American
ki-te-kanohi (face-to-face) approach, operating from a manaakitanga (hospitality) base, the mahi-a-whānau approach (whānau approach), and mahi wairua (spiritual approach) (Corter et al 2011).

4.4.5 Workforce

Quinn and colleagues (2011) developed and delivered communication education to 55 oncologists in response to needs assessment findings that they warranted training in communicating difficult cancer issues to Hispanic patients. A workshop improved oncologists’ knowledge and disrupted their level of comfort with their communications when these were based on cultural misperceptions. As the authors state, the workshop itself was a catalyst for some of the oncologists realising they needed to improve.

The ability of health care providers in American Indian rural communities to manage the pain of cancer patients improved following their participation in videoconferences focused on pain management (Haozous et al 2012).

4.5 Rehabilitation and Support Services, Including Quality of Life and Survivorship, and Palliative and End of Life Care

Foster, Lafond, Reggio and Hinds (2010: 207) discuss the cultural considerations in paediatric palliative care for children with cancer and their families, stating that ‘Nurses must explore and honor cultural beliefs and values to enhance the quality of life for each child and family across the continuum of care’. Importance is placed on communication, including asking children and their families about, and then listening to their expression of their cultural and spiritual needs.

From their review of five culturally tailored cancer survivor programmes in minority (three American Indian, one Hawaiian, one Asian American) communities funded by the National Cancer Institute Center to Reduce Cancer Health Disparities, Kaur and colleagues (2012) list five lessons.

1. Programmes that have active community input into their design and evaluation are most successful.
2. Needs assessments with patients following their active cancer treatment can support the development of appropriate and responsive after-care.
3. Cultural tailoring of health education can occur in collaboration with communities, especially elders.
4. Programme planning should address the critical issues of spirituality and social support.
5. Quality of care can be improved through provider training and education, especially pain management.

4.6 Comprehensive Approaches to Reducing Disparities

Four studies reported on more comprehensive approaches to reducing ethnic cancer disparities (see Table 5). The REACH programme is the Centers for Disease Control and Prevention’s (CDC) programme to eliminate disparities through mobilizing community resources. One example is the REACHing American Indians in New Mexico and Colorado initiative led by the Albuquerque Area Indian Health Board, Inc. The Board coordinates the Partners in Tribal Community Capacity Building (REACH 2010) Project that ‘works to build community and scientific capacity to address the rising incidence of breast and cervical cancer among American Indian women’. Four aims have underpinned the programme since its inception (Centers for Disease Control and Prevention 2008: 9).

- ‘Create an atmosphere of inclusion and trust.
- Build skills for tribal members within the tribal health system.
- Strengthen relationships among tribal programs and between tribal and outside programmes.
- Promote sustainability so tribes could better manage challenging health issues into the future’

Breast cancer awareness has increased in the community as a result of this project, and 130 women aged 40 or older have received their first mammogram because of a community-based participatory intervention called Mammography Days. During this intervention the women were provided with culturally tailored information, including being shown a video, ‘Healthy Navajo Women: Walk in Beauty’ featuring community members and health providers talking about cervical and breast cancer. A case manager specialising in breast health provided support to the women. They were also transported the 45 miles to the hospital for their mammograms. (Centers for Disease Control and Prevention 2007).
Table 5. Interventions to reduce disparities through comprehensive approaches

<table>
<thead>
<tr>
<th>Ref</th>
<th>Cancer</th>
<th>Loc</th>
<th>Eth</th>
<th>Continuum</th>
<th>Intervention(s)</th>
<th>Design</th>
<th>Control</th>
<th>n, Duration</th>
<th>Outcome(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Behringer et al. 2010</td>
<td>CCC</td>
<td>USA</td>
<td>AI, AN</td>
<td>All</td>
<td>Cancer coalitions established in local Indigenous communities to coordinate efforts to help cancer survivors and their families.</td>
<td>CS</td>
<td></td>
<td>5 different states &amp; tribal coalitions</td>
<td>Elements of successful coalitions included vision, diversity, leadership, attainable priorities, financial benefits, and mutual resources.</td>
</tr>
<tr>
<td>Centers for Disease Control 2007, 2008</td>
<td>CCC</td>
<td>USA</td>
<td>AI</td>
<td>All</td>
<td>Tribal capacity building</td>
<td>Varied</td>
<td></td>
<td></td>
<td>Creating an atmosphere of inclusion and trust. Building skills for tribal members within the tribal health system. Strengthening relationships Promoting sustainability</td>
</tr>
<tr>
<td>Shahid et al. 2008</td>
<td>CCC</td>
<td>Australia</td>
<td>AU</td>
<td>All</td>
<td>Environmental scan to identify emerging issues</td>
<td>Staff interviews</td>
<td></td>
<td></td>
<td>Priority areas and identified to enable organisations to improve access for Indigenous Australians.</td>
</tr>
<tr>
<td>Weinberg et al. 2010</td>
<td>CCC</td>
<td>USA</td>
<td>AI, AN, PI, PR</td>
<td>All</td>
<td>Culturally-specific, evidence-based comprehensive cancer control programmes</td>
<td>CS</td>
<td></td>
<td>n=4 Indigenous CCC initiatives</td>
<td>Empowerment of communities to implement strategic cancer control plans, including recognition of local leadership and local solutions. Increase in lung cancer screening and early diagnosis. Increased efforts in prevention (including HPV vaccination), and early detection. Health care service and policy advocacy.</td>
</tr>
</tbody>
</table>

Note. AI=American Indian; AN=Alaska Native; AU=Australian Aboriginal; CCC=Comprehensive Cancer Coalition; CS=Case Study; Eth=Ethnicity; Loc=location; n=number; PI=Pacific Island; PR=Puerto Rican; Ref=Reference
Behringer, Lofton and Knight (2010) describe models of coalitions for Comprehensive Community Control. When a Comprehensive Cancer Control strategy was developed with five tribes in South Puget, Washington State community cancer myths were dispelled (e.g., discussion would lead to more cancer diagnoses). Local cancer survivors lead this initiative and coordinate many of the activities (e.g., transportation, grief counselling, clinic coordination).

An environmental scan in Australia identified emerging issues that needed to be addressed by a planned Comprehensive Cancer Control initiative (Shahid et al 2008). These issues included: recruitment of Indigenous staff, capacity and capability building within the Indigenous health sector, and Indigenous representation in cancer support services. The place, and inclusion, of traditional medicines and traditional healers was also highlighted as an issue that had been neglected in cancer-related initiatives.

Weinberg et al. (2010) describe four district Comprehensive Cancer Control programmes aiming to eliminate cancer disparities. In these programmes, ‘communities are empowered to implement strategic plans to reduce their significant cancer burden through optimal use of their readily available resources’ (Weinberg et al 2010: 2020).

The first Comprehensive Cancer Control programme, in the Cherokee Nation, operates within the context of tribal self-governance, including the delivery of health care (8 clinics, 1 hospital) to a population of 130,000. The Nation had already experienced a successful colorectal awareness campaign consisting of culturally tailored information, public service announcements, and exhibits (e.g., inflatable, walk-through Super Colon). The focus then shifted to lung cancer and the reduction in the availability of commercial tobacco. Legislative controls were combined with an awareness campaign, a Quitline (that experienced 200 percent increase in utilisation), and tobacco use screening and cessation counselling at clinics. As a result cancer screening increased, and diagnoses of lung cancer at its earliest stages increased from one percent to four percent.

HPV vaccination was part of the CCC partnership in the Commonwealth of the Northern Mariana Islands. An initiative to vaccinate 100 percent of the target audience (females aged 9-26 years) engaged public schools, faith-based organisations and non-profits. The events held included student discussions, a mass media campaign, community events to raise awareness, and many support and dialogue meetings. The result was 92 percent vaccination coverage (Weinberg et al 2010).

The Alaska Comprehensive Cancer Plan includes programmes operating along the cancer continuum. Colorectal cancer screening and education, for example, is being addressed through the media, fundraising, community education, and workplace activities. Other examples include the development of culturally tailored resources, the holding of palliative care symposia, strengthening of telehealth initiatives, and holding community consultations across social media. The outcomes from these initiatives are not described. Weinberg et al. (2010) also described Comprehensive Cancer Control efforts in Puerto Rico as being in their early stages. Even so the authors state that awareness has been raised about screening, diet, and physical activity.

5 Discussion

Māori bear the burden of cancer morbidity and mortality disparities that improved access to cancer health services could help reduce. Intervening in Māori cancer disparities and improving Māori access to cancer health services are key to the Ministry’s Cancer Control Strategy Action Plan (Ministry of Health 2005) and the current Statement of Intent (Ministry of Health 2013). The present review of the evaluations of cancer service interventions explored what type of interventions led to improved access to cancer services for Māori, Indigenous, and/or minority ethnic group people, and improved outcomes from cancer health service utilisation. Table 6 below summarises successful community and clinic-based interventions from the review. The interventions are organised according to whether they focus on:

- Patients through the reduction of logistic and financial barriers or the provision of educational information
- Community health workers and other health practitioners who work with patients in their community to support patient education, screening and access to other cancer health care
- Building a culturally competent health practitioner workforce
- Clinic reorganisation to facilitate accessibility
- Health system initiatives
### Table 6. Intervention strategies to improve access to cancer health services

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Description</th>
<th>Cancer Care Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Facilitate patients’ health literacy and access to cancer screening services</strong></td>
<td>Initiatives improve the health literacy, understanding of interventions, and access to services for patients. This includes the provision of information and reminders.</td>
<td>Reduce financial and logistic barriers to screening (e.g., provide transport, childcare) Culturally tailored screening information (written, DVD, web-based), community education, and mass media cancer screening campaigns Exploration of individual barriers to screening and use of this information to tailor information and cancer screening options in low-intensity interventions (e.g., websites)</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 culturally-tailored: • Home-based education, for women (about screening) and for patients and their families (about cancer journey) • Individual counselling • Community-based education and discussion • Coaching for patients (including telephone calls) • Family-based support • Cervical screening Liaison between community based and clinic based navigators</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>Provider-directed training (e.g., cultural sensitivity, communication) on its own or combined with reminders Navigator training and networking opportunities Indigenous health professional training to improve knowledge of common cancers Multicomponent physician screening education, including screening training Chart-based reminders for health practitioners Oncologist training in culturally responsive communication with patients and their families Training about pain management for cancer patients and survivors</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>Local community and tribal involvement Community input into the design and evaluation of programmes Improved registration and appointment processes Case management of patients, to improve patient monitoring and follow-up Structured counselling and navigation to assist patients with diagnostic resolution and treatment Needs assessments with patients following treatment Inclusion of spirituality and social support in cancer survivor programmes</td>
</tr>
<tr>
<td><strong>Health system</strong></td>
<td>The health system can respond through funding formulas and strategies that reduce the barriers imposed by patient financial resource limitations.</td>
<td>Financial (reducing the cost) and logistical (provision of transportation) support to facilitate access to screening services for low-income clients Build tribal capacity to deliver education programmes National communication campaigns about screening</td>
</tr>
</tbody>
</table>

*Source. Inspired by Chin, et al. (2012: 996, Table 3)*
5.1 Community-based Educators, Health Practitioners and Navigators

The term patient navigation was first used by Harold P. Freeman, a Harlem-based surgical oncologist, to help ensure that poor people with cancer did not fall through the cracks in their journey into and through the health care system (Fillon 2011). Freeman developed nine principles of patient navigation, including: patient-centric approach, navigators with clearly defined roles, and navigation specialists for all phases of patient care (Freeman and Rodriguez 2011). In the United States cancer patient navigator services are provided by all of the medical centres funded by the National Cancer Institute’s Community Cancer Center Program (NC CCCP) (National Cancer Institute 2012). The Accelerating Disparity Reducing Advances Project in the United States also endorses the importance of patient navigators for cancer access (Institute for Alternative Future 2006).

There was evidence from the systematic reviews and intervention studies that patient navigators help reduce ethnic and racial disparities in access to cancer care. Patient navigators and community health workers who offer navigation services may be from the same communities as those they are trying to reach, and may themselves to cancer survivors. A meta-analysis of 18 community health worker interventions aimed at improving mammography screening rates concluded that the deployment of community health workers led to a significant increase in screening rates, with this effect being strongest ‘when participants and CHWs were similar racially or ethnically’ (Wells et al 2011: 1595).

Cancer patient navigators offer patients services across the cancer care continuum, with cancer patient navigator programmes tailoring their approach to fit their community and programme context (Braun et al 2012). For example, recognition that cancer impacts on the patient and their family also led to the development of culturally responsive family interventions in Hawaii that improved coping and self-efficacy (Mokuau et al 2008). Navigators are also able to tailor the resources they use to meet the needs, attitudes and knowledge of the people they are supporting. In the successful interventions included in this review, both navigators and educators used cultural appropriate educational material, reminders, and other resources. Cancer patient navigators provide community education in communities, use a variety of tools to increase screening, help clients get their cancers diagnosed and staged, support patients to complete treatment and adjust post-treatment, and guide patients and families when the cancer is terminal (Braun et al 2012). While there is mounting evidence that cancer patient navigators can increase screening rates, there is limited evidence of their efficacy in patient diagnosis and treatment follow-up, and little research on cancer patient navigators and survivorship (Paskett et al 2011). More research into the role of navigators in guiding patients on their cancer journey is warranted given Hill et al.’s (2013) assertion that Māori cancer patients suffer accumulating disadvantage on this journey and that this accounts for the a large portion of the disproportionately high Māori cancer mortality rate.

The provision of navigators or educators who assess and then tailor their services to the needs of individual patients and their families is both compatible with the health literacy literature and responsive to the diverse realities of Māori (Ministry of Health 1997). Although not explicitly written about in much of the health navigator literature, the importance of whanaungatanga (respectful and supportive relationships) must also be considered for Māori if such navigation and education interventions are to be successful (Corter et al 2011; Mauriora ki te Ao 2010). It would be surprising to find that the successful navigation approaches canvassed in this review did not also rest upon a foundation of connectivity, support and respect.

5.2 Education and Knowledge

‘Cultural leverage’ is a ‘focused strategy for improving the health of racial and ethnic communities by using their cultural practices, products, philosophies, or environments as vehicles that facilitate behavior change of patients and practitioners. Building upon prior strategies, cultural leverage proactively identifies the areas in which a cultural intervention can improve behaviors and then actively implements the solution’ (Fisher et al 2007: 245S). Masi, Blackman and Peek’s (2007) review of breast screening interventions supported the efficacy of culturally tailored educational material. By themselves, however, low-intensity resources (reminder letters, message calendars) do not appear to be very effective. An exception is colorectal cancer screening where the effective of low-intensity resources may coincide with the early development of screening. Those responding to low-intensity resources may have been early adaptors, and this is supported by the relatively low overall screening rates in the USA (Katz et al 2008). A second exception is where the provision of educational material on a website enables it to be tailored to patients’ needs and barriers (Ruffin et al 2007).

The use of culturally tailored material may also increase only knowledge and not screening behaviour, even when delivered within an institutional context such as a church (Mishra, Bastani, Crespi, Chang, Luce, & Baquet, 2007; Mishra, Luce, & Baquet, 2009). The resources should therefore be used as part of a wider group or community initiative (e.g., talking circle discussions, home-based family and community discussions), or in conjunction with
navigation services. This has been demonstrated especially well by Comprehensive Cancer Control programmes (Weinberg et al 2010).

Public campaigns can also be successful at raising awareness, increasing knowledge, and promoting family and community discussions and decision-making. For example, the mass media communications for Māori women about attending breast and cervical cancer screening were cultural tailored, building upon Māori cultural values of whānau (family), and their importance for Māori women. These communications connected with the importance of Māori women’s relationships with whānau, hapū (sub-tribe), Iwi (tribe) and the land (Ministry of Health 1997). The provision of these communications has led to an increase in screening by Māori women (Mokuau et al 2008).

5.3 Culturally Responsive, Coordinated Care

The efficacy of navigators and educators who are able to tailor their services to their patients’ backgrounds provides one opportunity for the personalised delivery of culturally responsive care that buffers patients from a health organisation and workforce that may not have cultivated the same sensitivities and capacity. When Māori have reported on barriers to cancer treatment they raise issues around the lack of a culturally responsive health workforce, and their desire for more effective and communicative relationships with health professionals. This makes the development of cultural responsiveness, or the capacity to facilitate Māori access, by health practitioners and health organisations important in the drive to reduce Māori cancer disparities.

While cancer myths have been dispelled among Indigenous communities through the development of Comprehensive Cancer Control strategies (Behringer et al 2010), the dispelling of Indigenous health professionals’ misconceptions proved more difficult (Croager et al 2010). Interventions designed to build health professionals skills generally improved knowledge and attitudes and led to enhanced skills among Indigenous health navigators, cancer control activities among Indigenous health professionals, and increased screening. The role of organisational stability and leadership should also not be overlooked as a lack of these elements can derail otherwise effective interventions designed to facilitate access demand (with patients) and access supply (with health professionals) (Han et al 2011; Masi et al 2007). Organisation changes that improve adherence to guidelines, implement case management, ease time pressures, and support cultural sensitivity training have positive effects on women’s cancer screening behaviours. Han et al.’s (2011) review supported the implementation of multiple strategies. This was the approach taken by a rural general practice serving a predominantly Māori community, with the result being almost community coverage in the number of women participating in breast screening (Thomson et al 2009).

5.4 Limitations of the Present Review

Only limited information was found about making cancer services more accessible for Indigenous or other ethnic children and young people. There is also a gap in the literature that has been sourced regarding rehabilitation and palliative care, and what interventions work to improve outcomes and access. The role of medication, and advances in medication and pharmacogenomics was not canvassed in this review.

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


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 percent 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 Cancers (Neoplasms), including but not restricted to:

- Breast Cancer
- Cervical Cancer
- Colorectal Cancer
- Lung Cancer
- Prostate Cancer

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 percent 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. These papers were more fully reviewed.

Five systematic reviews, two meta-analyses, and 37 intervention studies were identified from the literature search. The reviews and meta-analysis and 17 studies focused on improving access to cancer screening. Two of the reviews also examined access to cancer diagnosis and treatment (Glick et al 2012; Sajid et al 2012). In addition two of the reviews and seven studies looked at diagnosis; one review and 10 studies looked at treatment; and there were four comprehensive or ecological intervention studies. The interventions are examined across this care continuum, with the findings from the reviews and meta-analyses included when their findings were relevant.

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.