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A diabetes prevention strategy based on a health needs assessment for Culturally and Linguistically Diverse (CALD) groups in Victoria

Prepared by
Greater Green Triangle University Department of Rural Health, Flinders and Deakin Universities
for
Diabetes Australia Victoria and the Life! Taking Action on Diabetes program

October 2008

“Delivering effective health care to a culturally diverse population is undoubtedly significantly more complex, difficult, time consuming and expensive than providing services to a single culture population. However, this problem is not insurmountable and can be addressed through strategies and approaches that recognise, respect and celebrate cultural diversity” von Hofe B et al (1)
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1. Executive summary

This discussion paper outlines the development of a Type 2 Diabetes Mellitus prevention strategy for Culturally and Linguistically Diverse populations in Australia. The main strategies proposed are in two phases and include:

Phase 1
1. Incorporation of CALD components into the Life! program

Phase 2
2. A CALD specific Life! Pilot program
3. A CALD specific Life! Program with bilingual facilitators
4. Involving family members, peer support, and community health workers.

Strategy 1 can be achieved within the existing Life! program budget. Strategies 2, 3 and 4 require additional funding. It is proposed that these strategies would be developed as a randomised control trial (RCT) by the Greater Green Triangle University Department of Rural Health researchers. This RCT would be the world’s first theoretically based, CALD specific, T2DM prevention program and is met with universal support from a wide range of experts consulted in Australia, UK, and US.

In Australia, interventions aimed specifically at preventing T2DM in CALD communities are non-existent or undocumented. There is substantial potential to develop diabetes prevention programs in Victoria that are culturally specific but may or may not be in English. Such programs would need to be developed through complex intervention methodology with thorough evaluation. The simplest development would be to train current facilitators in the important aspects of the culture-specific diabetes prevention including illness beliefs, locus of control, importance of family, elders and respected community leaders, learning through story-telling, as well as specific aspects of nutrition and physical activity. Interventions should be tailored to accommodate both individualistic and collectivist models of health, such as inclusion of family members. As ever in public health, a paradox applies. Those who are likely to benefit most will be hardest to reach. This not only applies to members of communities who face linguistic and social barriers in attending mainstream programs, but also extends to those with low literacy.

A review of the international literature on diabetes prevention and related diabetes education has been undertaken. The available public health information on diabetes in CALD populations by their countries of origin has been analysed and reviewed. There is a paucity of Australian T2DM prevalence data for CALD communities. There are also inadequate procedures in place to monitor CALD specific prevalence and demographics related to T2DM in Australia. Gaps in the published literature have been filled by conducting key informant interviews with experts in Australia, Finland, Germany, the United Kingdom, and the United States.

There are several well researched theories and models relevant to behaviour change and to understanding cultural and social factors related to health and well being. The current Life! Taking Action on Diabetes program (Life!) uses a specific combination of different behavioural models. Life! is an evidence based, behaviour change program targeted at 25,000 Victorians over 50 years of age and at high risk of T2DM, with the aim of substantially delaying or preventing the
development of T2DM among individuals in this group. Currently people from CALD backgrounds can ‘self-select’ into the Life! program, but there is no specific program component for these communities.

Key informants in Australia and overseas have been interviewed. Site visits have been made to Helsinki in Finland, Newham and Leicester in the United Kingdom (UK), Chapel Hill, New York City, and Indianapolis in the United States (US) where the world’s leading experts in diabetes prevention were consulted. Within Australia eleven key informants have been interviewed. What stands out is that there has been very little development of CALD programs worldwide and even less evaluation.

In summary the literature and information available that is relevant to T2DM prevention in CALD communities overwhelmingly indicates that major evaluation gaps potentially perpetuate an ineffective approach to prevention of T2DM in CALD populations.
2. Proposed strategies

2.1 Aim

The key aim is to adapt the *Life! Taking Action on Diabetes (Life!)* program for Culturally And Linguistically Diverse (CALD) populations in Australia. The overall *Life!* program aim is to prevent the onset of Type 2 Diabetes Mellitus (T2DM). The recruitment process for the *Life!* program also has the potential to identify those who have T2DM but are unaware.

Limitations of the health needs assessment for CALD populations are:

- No accurate data on prevalence of T2DM, and what little is known is based on self-report by English speaking respondents;
- Level of English proficiency will require detailed analysis of Australian Bureau of Statistics (ABS) data once local implementation sites have been chosen;
- The information about where CALD populations reside will require analysis of Local Government Areas (LGAs) level data; a pre-requisite of any marketing and recruitment strategy;
- Although Turkish and Arabic populations have been chosen for previous interventions in Melbourne, they do not feature in the most populated CALD communities listed in Table 1;
- The levels of acculturation are unknown for CALD communities;
- There are no evaluated and effective Australian programs published for CALD populations.

2.2 Recruitment

Research suggests that the process of recruitment for CALD communities into prevention programs can be difficult as these communities experience a variety of barriers, which include barriers in language, filling in forms, lack of available time for classes, barriers to having tests when one does not feel sick and different illness beliefs (2). Recruitment methods for participants in the CALD *Life!* program are dependent on activities targeted at the communities in culturally appropriate ways. In this process, factors such as risk perceptions and outcome expectation would need to be researched for the CALD communities being targeted (3).

- The *Life!* program staff would “go to the people” and make use of “happenings”;
- Education for General Practitioners (GPs) on issues such as risk perception, outcome expectations and cultural models of health and illness are essential for successful recruitment of participants into the CALD *Life!* program;
- Use of GPs from specific CALD backgrounds to recruit and support patients from their practice;
- GPs would be encouraged to send the AUSDRISK (AUStralian Diabetes RISK Tool) test to all patients on Chronic Heart Disease (CHD) registers and all patients on diabetes registers, so that they can have their family members aged over 40 complete it;
- Hospitals with the Gestational Diabetes Mellitus (GDM) registers could be asked to send the AUSDRISK test to women who had GDM from specific CALD backgrounds and are now over the age of 40 (these tests are not valid below the age of 40);
Use of community leaders and networks that have already been established for many CALD groups; and

Recruitment of specific CALD populations using print and other advertisements will contain the Diabetes Australia Victoria (DA Vic) multilingual phone line. Probable participants could be directly linked to the DA Vic call centre, where an operator or health professional could speak to the participant in their own language and receive further information about the program.

2.3 Approaches

There are four key strategies proposed in two phases to account for CALD populations when preventing T2DM in the Life! program. The strategy has been divided into two phases for implementation. The first phase has been designed for immediate implementation largely using existing resources of the Life! program. Phase 2 aims to address those members of CALD populations most difficult to reach and at highest risk for T2DM. These strategies would break new ground through research and require additional and not yet identified resources. This can be viewed in Figure 1.

Phase 1

Strategy 1

On the basis of the current Life! program some CALD specific changes will be incorporated in the facilitator training related to:

- Diet,
- Lifestyle activities,
- Low English proficiency levels,
- Low literacy levels, and
- Disease perception and culturally specific dimensions of health and health beliefs.

1. Life! facilitators will receive broad cultural awareness training on the different CALD communities that each facilitator may encounter with regards to the area they are working with. They will also receive training with regards to group dynamics and acceptance of other people’s cultural backgrounds, and literacy levels. For example, cultural aspects of diet, lifestyle, tradition and family structure will be examined in the training session. Extra time and personal involvement that may be required to assist the participant to complete their homework sheets and questionnaires will be discussed with the facilitators in this session. This part of Phase 1 can be integrated quickly into the Life! facilitators training, starting with the annual review day in February 2009.

2. Existing Life! facilitators who already have experience working with particular CALD communities, or from CALD backgrounds or both, could be invited to share their knowledge and take part in running specific CALD Life! programs. About a quarter of the facilitators have a CALD background which could be identified, so they could offer programs specifically for that community (eg. Italian speaking facilitators running Italian language groups).

3. The analysis of CALD participants who have already self-selected into the Life! program can provide additional information for this proposed strategy. Currently they aren’t enough CALD participants in Life! for useful analysis.
4. A social marketing approach will need to be developed to enhance uptake of CALD participants into the *Life!* program.

5. GPs from CALD backgrounds could be recruited through General Practice Victoria.

6. GPs from CALD backgrounds and community leaders could be trained to give interviews on ethnic radio stations.

7. Cultural ‘happenings’ should be used by facilitators for raising awareness on recruitment as outlined in the recruitment section above. Cultural ‘happenings’ could occur within churches, CALD specific clubs (Hellenic clubs, Italian clubs etc) or community centres.

8. *Life!* facilitators will need specific support materials. For that purpose, a bank of culturally and linguistically translated materials and resources needs to be created. These will be gathered from a variety of organisations such as CALD community organisations, Diabetes Australia Victoria and the Whitehorse Community Health Centre. *Life!* facilitators and participants from CALD backgrounds could be invited to prepare materials for approval by *Life!* program staff.

---

**Figure 1** Phase 2 of the proposed strategies for CALD *Life!* program subjected to research development and funding
Phase 2

Strategy 2
Pilot a CALD *Life!* program for English speaking CALD communities that will include:

- disease perception and culturally specific dimensions of health and health beliefs,
- culturally appropriate diet
- culturally appropriate physical activity.

Funding sources for development and testing would need to be identified before this part of the strategy could be implemented. Numerous expert advisors are unanimous in stating that a randomised controlled trial is needed.

This pilot will occur:

- In the North Western Melbourne suburbs (Greek, Italian and Maltese communities) and;
- In the Dandenong region (Indian subcontinent communities, including Sri-Lankan communities);

The *Life!* program materials will be culturally tailored to best suit the CALD community under investigation. The changes could include modifying the dietary recommendations and suggesting culturally appropriate forms of exercise. Lessons from Diabetes Education and Self-Management for Ongoing and Newly Diagnosed patients with type 2 diabetes (DESMOND) and facilitated storytelling will be incorporated into the program. To test the applicability of these changes to the current *Life!* program, a focus group with respective CALD communities will be undertaken.

This pilot would be undertaken as a Randomised Controlled Trial (RCT) by the Greater Green Triangle University Department of Rural Health (GGT UDRH) researchers and would be evaluated using the same outcome measures as in the original *Life!* program. This includes the measurement of Body Mass Index (BMI), waist circumference, physical activity, dietary changes, glucose, lipid profile and blood pressure. In particular, it has been identified that optimal BMI can differ depending on ethnicity (4-9).

The CALD *Life!* program pilot could take place in various primary health care settings, using a similar approach to the current *Life!* program. CALD communities will be able to nominate the kind of local facility they wish to use for the program.

Strategy 3
Create a CALD *Life!* program for non-English speakers or low English speaking CALD communities that will include:

- disease perception, culturally specific dimensions of health and health beliefs,
- culturally appropriate diet
- culturally appropriate physical activity.

Funding sources for development and testing would need to be identified before the strategy would be implemented. Bilingual facilitators and other health professionals will be recruited to carry out this program and will assist in the development of a culturally and linguistically translated *Life!* program materials to ensure they are culturally appropriate.

To increase the health literacy, uptake and effectiveness of the CALD *Life!* program a bilingual facilitator or other health professional would be an essential component. They would have the adequate cultural understanding of the CALD population they are working with. CALD community health centres will also play a central role in the promotion and recruitment of CALD participants and facilitators.
Strategy 4
In keeping with many cultural norms, within the CALD Life! program family members, peer support and non health professionals will be able to assist participants.

Strategy 4 will encompass the same elements as the previous strategy, with the addition of family members, peer support and non health professionals to the program.

Engaging a family member, cultural peer or non-health professional from the CALD community to assist the participant in the CALD Life! program would have benefits, such as enhancing health literacy (10). The cultural peer or non-health professional should have a high standing in the CALD community and therefore assist in increasing community awareness about risk of T2DM and the importance associated with prevention of this chronic disease (11). The evidence concerning the use of peer support as a method of health education has outlined later in the document.

3. Action plan

After confirmation of the strategy, a detailed action plan to complete the tasks in phases one and two will need to be developed. The action plan should be completed by the end of January 2009.
4. Background

T2DM is recognised as one of the major current health issues in modern society (12, 13), where approximately half the risk of developing this condition is attributable to the environment and the remainder is genetic (13). The current explosion in incidence is entirely due to lifestyle factors.

Data from the International Diabetes Federation (IDF) indicates that approximately 194 million people worldwide (5.1%) in the age group 20-79 had diabetes in 2003. This estimate of prevalence is expected to increase to 333 million (6.3%) of the adult population by 2025. There are still many cases of undiagnosed diabetes. The statistics indicate that for each diagnosed case of diabetes there is one undiagnosed case (14). The regions with the highest number of people with diabetes are the European and the Western Pacific regions with 48 and 43 million cases respectively. The Western Pacific region prevalence rate of 3.1% is significantly lower than the North American region prevalence rate of 7.9% and the European region prevalence rate of 7.8% (14).

In Australia, T2DM is one of the leading chronic diseases with 3.6% people (700,000) being diagnosed in 2004-2005 (15). In Victoria, the prevalence of T2DM has increased substantially in recent years as shown in Figure 2.

![Figure 2 Prevalence of Diabetes for the Victorian population by Local Government Areas in 2001 and 2006 (Diabetes Australia Victoria, 2006)](image)

The GGT UDRH developed a Diabetes Prevention Program (GGT DPP) for use in Australian primary health care settings with English speaking groups (16). This GGT DPP was based on the Finnish Diabetes Prevention Study (DPS) (17) and the Good Ageing in Lahti Region (GOAL) Lifestyle Implementation Trial (18). Both of these interventions used a lifestyle behaviour change approach in primary health care settings for those at high risk. The intervention goals for both studies were to reduce body weight, reduce dietary and saturated fat, increase physical activity and dietary fibre (17). The DPS showed a relative risk reduction of 58% after a mean intervention period of three years. This result has been sustained during the three years follow-up intervention with a 43% relative risk reduction for T2DM (19).
Similar results using the same approach were obtained in the GGT DPP. These included a mean weight reduction of 2.52 kg and waist circumference by 4.17 cm and a risk reduction for T2DM of 40%. The study provided evidence that a type 2 diabetes prevention program using lifestyle intervention is feasible in primary health care settings in Australia (16).

With the success of the GGT DPP, the Victorian Department of Human Services (DHS) funded DA Vic and GGT UDRH to develop and implement *Life!*. This program is an evidence based, behaviour change program that will provide an opportunity for 25,000 Victorians over 50 years of age and at high risk of T2DM to substantially delay or prevent the development of type 2 diabetes (20). This lifestyle behavior change program consists of six group sessions, attended over a period of eight months. The *Life!* program goals are:

1. No more than 30% energy from fat
2. No more than 10% energy from saturated fat
3. At least 15g/1000 kcal fibre
4. 30 min/day moderate intensity physical activity
5. 5% reduction in body weight

DHS aims to deliver culturally responsive and equitable services to all Victorians in order to protect and enhance the community’s physical, mental and social well-being (21). DHS strategies and policies seek to understand people and their needs, provide culturally relevant and accessible information through effective language services, meet the specific needs of different communities and promote the benefits of a culturally diverse Victoria. This report outlines what needs to be done to support the DHS strategy for meeting the specific needs of CALD populations with respect to adaptation of the *Life!* program.

### 4.1 CALD definition

Generally, the definition for culturally and linguistically diverse or CALD populations refers to persons born overseas or having at least one parent born overseas. Usually CALD populations are defined as the following (22):

- people born overseas in countries where English is not the main language spoken; or
- people born in Australia whose main or preferred language spoken is not English.

This definition may not always recognise the complexities involved in identifying specific CALD communities. Data on country of birth, or language spoken at home, or both, may not take into account the importance of cultural identity or acculturation. For example, English is the first language for many South Asians but culturally, and particularly in terms of food, there are differences from typical Anglo-Celtic diets. In this report the definition of CALD is extended beyond the constructs of language and takes into account the concept of cultural identity when needed.
4.2 CALD populations in Victoria

Victoria comprises a wide range of cultures, with 25% of the population born overseas, originating from 233 countries, speaking over 180 languages, and following 116 religious faiths (23). The health status of CALD populations varies according to factors such as age, birthplace, proficiency in English, socio-economic status and satisfaction with employment and life. Subsequently, different CALD populations can have different patterns of illness from the general population, enjoying advantages for many conditions and disadvantages for others (24).

4.3 CALD populations and T2DM

Some of the data on prevalence of diabetes among CALD communities in Australia is based on prevalence data of CALD communities in their country of origin. These data show that certain CALD populations are particularly predisposed to developing impaired glucose tolerance (IGT) (25) and T2DM (26-29). Additionally, the risk of T2DM increases in populations that have migrated to Western countries, compared with those who remain in their country of birth (26). One of the reasons is that there is increased exposure to different lifestyle factors associated with developing T2DM (30-32). Recent statistics indicate that 28% of the Australian population is born overseas, and 35% of people with diabetes are born overseas (33, 34).

The relationship between migration and risk of diabetes is probably bidirectional, where people arrive in a new country with a genetic predisposition, and may be exposed to stronger or weaker environmental and lifestyle risk factors compared with their country of origin. Given this possible link between migration and the increased risk of T2DM (26), there is a need for diabetes prevention strategies that meet the needs of groups that are culturally and linguistically diverse from the general population.

Table 1 shows T2DM prevalence rates in Victoria, New South Wales (NSW) and Australia for different CALD populations. The data in this table comprises information from a variety of sources including the ABS, an extract of the Victorian Population Health Survey (VPHS), the NSW Department of Health (34), the Australian Institute of Health and Welfare (AIHW) and the Department of Immigration and Citizenship (DIAC). This table is ordered according to the most populated CALD communities in Melbourne, not by highest prevalence of T2DM. Arabic speaking countries have also been included for comparison with data from NSW department of health. These CALD communities are not in the most populated communities as listed in the table below. The median age of these CALD populations was included to show those CALD populations who are most at risk.

The limitations of the data are of great significance. All prevalence rates rely on self reported incidence of diabetes, and self report data may not be an accurate or reliable source of information. Other limitations of the data include the non-standardised median ages of CALD populations the small sample sizes, and wide confidence intervals from extractions of the VPHS dataset.
Table 1 Prevalence of Type 2 Diabetes Mellitus by country of birth

<table>
<thead>
<tr>
<th>Country of birth</th>
<th>VIC (2)</th>
<th>NSW (3)</th>
<th>Australia (3)</th>
<th>Median age (4) years</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>(%)</td>
<td>(%)</td>
<td>(%)</td>
</tr>
<tr>
<td>Italy</td>
<td>104</td>
<td>4.8</td>
<td>(0.7, 8.9)</td>
<td>10.8</td>
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<tr>
<td>Vietnam</td>
<td>45</td>
<td>0.0</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>China (excl. SARs and Taiwan Province)</td>
<td>50</td>
<td>2.0</td>
<td>(0.0, 5.9)</td>
<td>2.6</td>
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<td>Greece</td>
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<td>(1.9, 19.9)</td>
<td>18</td>
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<td>India</td>
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<td>(0.4, 14.4)</td>
<td>11.3</td>
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<td>Sri Lanka</td>
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<td>13.5</td>
<td>(2.5, 24.5)</td>
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<td>(0.0, 14.6)</td>
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<td>Hong Kong (SAR of China)</td>
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<td>South Africa</td>
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<td>Arabic Speaking Countries</td>
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<td>5.1</td>
<td>(4.5, 5.6)</td>
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</table>


(2) Victorian Population Health Survey: Extract, Department of Human Services Victoria, 2005


5. Literature Review

From a review of the international literature related to diabetes prevention and management programs, it appears that some programs target both the general population and CALD populations, and others target only the general population. Programs that target CALD populations offer culturally specific and unique program elements. The content of these programs accounts for CALD population characteristics that differ from the general population.

Tables 2–4 outline results from the literature review and indicate key program characteristics relating to CALD populations as well as the program outcomes. While the current focus is on diabetes prevention (Table 2), diabetes management or education programs (Tables 3 and 4) also offer potentially useful information about specific CALD population needs.

The GGT UDRH team has been in contact with members of the research teams cited in the prevention studies in Table 2, with the intention of learning more about their interventions. Resources from these programs are not publicly available and some research teams were not forthcoming about the details. What can be concluded from the studies listed in Table 2 is that lifestyle interventions have worked in these populations, but details about the adaptation of these programs for some groups such as those in China and India are not available.

The program from Finland did not include a CALD component. The US DPP program did have a CALD component which included Chinese and South Asians. Outcomes in the US DPP were equal for low literacy, CALD, and the general population. According to Professor Marrero, one of the investigators in the US DPP, the resources deployed in the US program were intensive. He stated that US$190 million was spent on 3,000 participants in the trial with intensive follow-up such that they could hardly fail to get individual attention by expert teams and therefore good outcomes.

Based on the literature review the successful approaches to preventing T2DM in CALD communities could consist of:

- Integration of specific cultural values, practices and beliefs into program material, such as maintenance of healthy aspects of traditional diet;
- Non-directive facilitation, interactive group sessions and story telling to convey program information;
- Encouraging family support and involvement in the program;
- Use of a bilingual health worker/facilitator, a bilingual diabetes educator or cultural peer to deliver the program;
- Involving respected community figures;
- Use of a life coach for individualised assistance with program goals;
- Use of pictorial/flashcards and video formats to convey program information; and
- Use of easy to understand written program material and translated program material.

In Australia much greater consideration of factors in multicultural population is required for the development of diabetes prevention programs, to meet the different health needs, expectations, beliefs and practices of over 200 different Victorian CALD groups (23).
## Table 2  Type 2 Diabetes Mellitus Prevention Programs (RCTs)

<table>
<thead>
<tr>
<th>Country</th>
<th>Participants</th>
<th>Intervention(s)</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>China (35)</td>
<td>Chinese</td>
<td>Diet change and/or increased physical activity (over 6 year period)</td>
<td>● Lifestyle intervention reduced the incidence of diabetes mellitus</td>
</tr>
<tr>
<td>Finland (17)</td>
<td>Finnish</td>
<td>Intensive diet and exercise program, involving 7 sessions with a nutritionist and follow-up visits. Individually tailored exercise advice.</td>
<td>● Those in the intervention group lost significantly more weight than those in the control group, as well as significantly lower plasma glucose concentrations. Positive changes in blood pressure, serum lipids and anthropometric indices.</td>
</tr>
<tr>
<td>India (36)</td>
<td>Indian</td>
<td>Four groups; control, lifestyle modification advice, metformin treatment given, both lifestyle and metformin interventions.</td>
<td>● No added benefit from combining both lifestyle and metformin.</td>
</tr>
<tr>
<td>United States (US) (37)</td>
<td>African American, Hispanic American/ Hispanic, Asian American or Pacific Islander and American Indian with IGT</td>
<td>Four treatment groups: Lifestyle intervention, metformin treatment, placebo pill treatment, troglitazone treatment</td>
<td>● Those in the lifestyle intervention group reduced their risk of developing T2DM by 58%. ● Metformin 31% reduction</td>
</tr>
<tr>
<td>New Zealand (11)</td>
<td>Western Samoan New Zealanders at high risk of T2DM</td>
<td>Community development model (on Samoan church population) to deliver the intervention, involving one Samoan worker trained in diabetes fieldwork techniques and community diabetes education. Another Samoan worker was an aerobics instructor. Leaflets, videos, flip charts, posters in Samoan were used.</td>
<td>● Significant reduction in waist circumference, as well as significant increase in diabetes knowledge and proportion of participants exercising regularly. ● Consumption of fatty foods was reduced, weight remained stable.</td>
</tr>
</tbody>
</table>
## Table 3  Type 2 Diabetes Mellitus Management Programs in the United Kingdom (UK)

<table>
<thead>
<tr>
<th>Participants</th>
<th>Intervention(s)</th>
<th>Outcomes</th>
</tr>
</thead>
</table>
| Pakistani British women with T2DM (38)            | Health Education Program involving pictorial flashcards and one-to-one interviews                                                              | ● Improved health knowledge  
● Improved glycaemic control                                                 |
| South Asians in Glasgow with T2DM (39)            | Educational program involving group sessions. Booklets about diabetes, diet and foot care were translated into relevant language. Informational videos were also recorded in the relevant language. | ● Significant improvements in diabetes knowledge, attitudes and practice. |
| Bangladeshi patients in deprived inner London district with T2DM (40) | Diabetes educational intervention for Bangladeshi patients: Sharing Stories. Advocate led support and education groups for people with diabetes, which used personal stories as the raw material for learning and action. | ● The shared social event of reacting to and discussing a participant’s story resulted in reflective learning and empowerment to take action.  
● Key outcome of participants was ‘knowing what to do about diabetes’. |
| DESMOND project (41, 42)                          | Diabetes education and self-management for ongoing and newly diagnosed diabetes based on behaviour change.                                      | ● Improvement of body weight  
● Changes in health beliefs about diabetes related illness                 |
<table>
<thead>
<tr>
<th>Participants</th>
<th>Intervention(s)</th>
<th>Outcomes</th>
</tr>
</thead>
</table>
| Chinese Americans with T2DM (43) | 10 session program integrating Chinese cultural values into an existing Western diabetes management program | • Almost half had lost approximately 2.2 kilograms  
• Most had reduced blood pressure  
• Mean HbA1c levels were lower.  
• Significant improvement on the Diabetes Quality of Life survey |
| Mexican Americans with T2D (44) | Eight weekly 2 hour group sessions, Characteristics of the program included encouragement of family involvement, as well as modelling through cultural figures and cooking demonstrations. | • Increase in diabetes knowledge  
• Significant decrease in weight and BMI  
• Improvement in self-efficacy scores, blood glucose and HbA1c  
• Improved self-management activities |
| Hispanic Americans with T2DM (45) | 6 weekly, 3 hour, cognitive behavioural education sessions conducted in Spanish. Use of written materials was minimised, with a focus instead on demonstration and return demonstration. | • Significant reduction in HbA1c in the first 6 months  
• Average total cholesterol improved, although not significantly.  
• 69% of participants showed an increase in diabetes health knowledge. |
| Urban, low-income, diverse CALD populations (Spanish speakers) with T2DM (46) | Version of the National Diabetes Prevention Program tailored for CALD population. Focus on diet, weight-loss, exercise and lifestyle changes, with specific strategies for shopping and eating out and relapse prevention. | • Increase in physical exercise, significant reduction in weight (although still below the goal amount), questionnaire responses indicating an increase in healthy eating habits.  
• No statistically significant decrease in HbA1c |
| Latin Americans with T2DM (47) | The program involved interactive group sessions. Focus on dietary advice, foot care, regular physical activity and screening through various teaching methods. | • Significant improvement in fasting blood glucose, HbA1c, body weight, systolic blood pressure, total cholesterol and triglycerides. |
5.1 Peer support and self management for diabetes

5.1.1 Experience in the US

The Robert Wood Johnson Foundation (RWJF) (48)

The RWJF Diabetes Initiative has been undertaken to demonstrate sustainable diabetes self-management programs in real-world settings. This initiative is founded on three pillars: ‘Advancing diabetes self-management’, ‘Building Community Supports for Diabetes Care’ and ‘Childhood Obesity prevention’. Through these programs, the RWJF Diabetes Initiative supported improvement of organisational and programmatic changes in primary care settings; funded innovative community-clinic partnerships aimed at supporting and improving diabetes self management among high-risk populations; and focused on innovative policy changes that promote healthy eating and physical activity in order to prevent childhood obesity.

Fourteen projects across the US were designed to include African Americans, Hispanic and American Indians. The intervention strategies used in the African American program were:

- Community diabetes education classes that incorporate physical activity and experiential learning about healthy eating;
- Walking programs and outreach in African American churches;
- Participation in community screenings and outreach activities; and
- Periodic stand-alone sessions such as seasonal cooking classes, dental screening, depression workshop and a summer cook-out.

By trying to reach as many people as possible in specific communities and tailoring activities to their needs, the Initiative aims to reduce the number of people living with diabetes who are negatively affected by the disease.

The program manager of the Diabetes Initiative told us that groups were puzzled when asked about adaptations they had made for the culture of participants. In fact, they had made adaptations without thinking about it because it came naturally. Examples are inclusion of families in Hispanic programs, story telling and the use of elders among American Indians, and delivery of lifestyle messages through churches for African Americans. In New York (Bronx), lifestyle changes did not take place until they were contained in a spiritual framework, such as ‘your body is a temple and God requires you to look after it’. Such messages were reinforced by religious leaders in Church sermons.

Lessons learnt in the Diabetes Initiative are being incorporated in the Peers for Progress program led by Professor Ed Fisher at the University of North Carolina.

Building on the findings of the Diabetes Initiative, Professor Ed Fisher who led that work, has initiated a Peers for Progress program because recent evidence from a variety of sources regarding diabetes management in CALD communities has indicated that the use of peer support is a promising approach to managing diabetes. A report written by Professor Fisher and others, and issued by the World Health Organisation (WHO), has defined peer support as ‘support from a person who has experiential knowledge of a specific health behaviour or stressor and similar characteristics as the target population’ (49). The success of peer support seems to be a result of peers sharing life experiences which then creates reciprocal and non-hierarchical relationships, and ultimately benefits participants’ ability to effectively manage their condition.
Peer support can be organised via a number of different methods including health worker-led
groups with peer exchange, peer-led face-to-face, peer coaches, and remote peer support. Each
approach differs slightly, but all have peer support as the central component. Participants from
these RCTs have demonstrated improved glycaemic control, diabetes-specific quality of life and
self efficacy. Peer-led face-to-face self management programs have also illustrated small short
term improvements in patients’ cognitive symptoms, self efficacy, self rated health and frequency
of aerobic exercise (49).

There are some gaps in the evidence on the effectiveness of peer support for management of
diabetes. For instance, most of the studies in relation to diabetes management have been run
in the US with ethnic minority groups such as Hispanics; none has been conducted with CALD
groups pertinent to Australia (49). There is no evidence for the effectiveness of peer support in
prevention of diabetes.

5.1.2 Experience in the UK

Sharing stories, Newham Primary Care Trust and University College London

In September 2008, Professors Dunbar and Reddy visited Newham Hospital and University
College London to meet the diabetes management team, Dr Shanti Vijayaraghavan and Professor
Trisha Greenhalgh, who have pioneered the use of narrative and storytelling for diabetes
education. Professor Greenhalgh noticed that illiterate Bangladeshi with diabetes learned from
other Bangladeshis through their stories. Newham is a highly multi-cultural area including a large
proportion of Bangladeshis. Using facilitated story telling groups, the members tell stories that
address particular problems and concerns that help each other understand and manage their
diabetes. The groups meet fortnightly for six months.

Bilingual Health Advocates have been trained to run these groups. The advocates are paid lay
leaders who undergo special training in narrative and reflective practice techniques. The training
program for the advocates lasts 12 half-days and covers both information and practice experience.
Topics include management of diabetes and mental health, how to share stories in a larger group,
and how to abstract the main themes from the stories. Although it has been difficult to obtain hard
clinical outcome improvements (glycosylated hemoglobin HbA1c), there is considerable evidence
pointing to participants being better able to manage their diabetes. It may be that the facilitated
story telling has not been sufficiently linked to clinical care to achieve improved clinical outcomes.
Facilitated story telling has considerable potential for English and non-English speaking low
literacy groups that are hard to reach for diabetes prevention. Professor Greenhalgh has indicated
that she would be prepared to help set-up the program in Australia as a research project (40).

Among the interesting information that was collected in Newham, is that they have successfully
run groups with a mix of men and woman, young and old people of mixed religious and social
backgrounds, people who might otherwise have political difficulties with each other, and groups
of different nationalities but with similar cultures. Greenhalgh and collaborators point out that
participants have diabetes in common. Everybody is interested in food so the tensions that might
otherwise exist are not important, and certainly did not cause difficulties for the groups.

Professor Greenhalgh’s Peers for Progress proposal details the underlying theories, research and
evaluation of facilitated story telling are available.
University of Leicester and Leicester Royal Infirmary

Professors Dunbar and Reddy visited the diabetes education team lead by Professors Melanie Davies and Kamlesh Khunti. Leicester has a high proportion of mainly Hindu South Asians. The Leicester team developed DESMOND – Diabetes Education and Self-Management for Ongoing and Newly Diagnosed patients with type 2 diabetes. The intervention consists of either a one day –six-hour program or two separate day three-hour programs. Educators are trained in non-directive facilitation so that group members learn from each other. There is high use of visual material and models to promote group discussion and the educators use the models for games to help participants identify healthy and unhealthy foods. DESMOND has now been recommended by the National Institute for Clinical Effectiveness in England and taken up by approximately half the health authorities. It appears to have no serious rival in the UK. A version called Black and Minority Ethnic (BME) DESMOND has been developed for the CALD population. It has not undergone clinical trials but is a variant of DESMOND.

The psychosocial theories underlying DESMOND have been reviewed and it has missed out on using a ‘Stages of Change’ model like Health Action Process Approach (HAPA), so that participants can plan and practise a series of small improvements to their diet and physical activity over time. Note that a structural equation model used to identify key success factors of the GGT DPP indicates the importance of planning, which only occurs ‘once off’ in DESMOND.

The Leicester group is part of DPLAN (20 European countries copying the FIN-D2D prevention program) and plans to use DESMOND for prevention of type 2 diabetes. The Leicester team has indicated willingness to collaborate on researching the introduction of DESMOND to Australia (42).

5.1.3 Experience in the Netherlands

A diabetes peer education program for Turkish people with T2DM in The Netherlands has shown that individualised peer education from a diabetes educator with a Turkish speaking facilitator at a general practice clinic resulted in high satisfaction and appreciation. No clinical outcomes were evaluated in this study (50).

5.1.4 Experience in Australia

In Australia, one RCT of chronic disease self management programs has been conducted in CALD groups from: Vietnamese, Chinese, Italian and Greek backgrounds in Victoria (51). No significant clinical outcomes were obtained.

In conclusion, some of the evidence described here is about peer support and self management programs for diabetes and other chronic diseases. Many of the principles and theoretical bases behind them could be applied to diabetes prevention in CALD populations.
5.2 Cochrane Review: Culturally appropriate health education for type 2 diabetes mellitus in ethnic minority groups

A recent Cochrane review ‘Culturally appropriate health education for type 2 diabetes mellitus in ethnic minority groups’ (52), has shown that culturally appropriate diabetes health education appears to have short term effects on glycaemic control and on participant knowledge related to diabetes and healthy lifestyles. The reviewed studies tended to be of short duration, and longer term outcomes were unknown. The studies in the review were essentially lifestyle modification programs for those people with diabetes, and there was a focus on management, education or both. They were also heterogeneous in numerous aspects, which made it difficult to make accurate comparisons.

Culturally appropriate health education was defined as ‘education that is tailored to the cultural or religious beliefs and linguistic skills of the community being approached, taking into account likely literacy skills’ (52). Not only is translation of language suggested in this definition, but also the concept of adaptation (e.g. diet, gender group, methods of program delivery). Health education in this context differs from the ‘usual’ health education offered to the general population.

Using specific selection criteria, the Cochrane review identified eleven randomised controlled trials, from a total of 6423 studies of culturally tailored diabetes health education programs. The trials had participants from defined ethnic minority groups, living in middle or high income countries, over 16 years of age, diagnosed with T2DM, and receiving a culturally tailored health education intervention. The eleven trials that met the selection criteria involved 1603 people, with ten trials providing suitable data for meta-analysis. The three main primary outcomes measured in the review were glycosylated haemoglobin (HbA1c), blood pressure and a culturally validated quality of life questionnaire. The secondary outcomes measured in the review included body mass index (BMI), lipid levels, long term complications of diabetes (retinopathy, neuropathy, and cardiovascular disease), total and specific mortality rates from causes attributable to diabetes, acute hospital admissions, and hypoglycaemic and hyperglycaemic episodes.

Recruitment of participants included varied settings: general practitioners’ or private practices’ waiting rooms, secondary care (diabetes) clinic, community clinics for the elderly, day care centres and community and church bulletins. The types of interventions used in the eleven studies were based on qualitative research, of which some utilised local and national guidelines to develop appropriate cultural protocols and materials and half were supported with a recognised theoretical model. The methods used for delivery consisted of group interventions, one to one interviews or a mix of both. Health professionals involved were dieticians, diabetes nurses, podiatrists, psychologists and exercise physiologists. The interventions did not last longer than 12 months. Many studies used prolonged and repeated intervention lasting between 6 to 12 weeks, with some having a follow-up at three or six months after the start of the intervention.

The comparison groups in the 11 studies received ‘normal’ (or ‘usual’) care depending of the country of the study. This means that no specific intervention was described and the participants in the comparison groups were given the same information as the intervention groups.

The results of the meta-analysis from the eleven trials found that glycaemic control (HbA1c) showed an improvement following culturally appropriate health education at three months (weight mean difference (WMD) -0.3%, 95% CI -0.6 to -0.01), and at six months (WMD -0.6%, 95% CI -0.9 to -0.4), compared with control groups who received ‘usual care’. However, this effect was not significant at 12 months post intervention (WMD -0.1%, 95% CI -0.4 to 0.2). Knowledge scores about diabetes and healthy lifestyles also improved in the intervention groups at three months.
(standardised mean difference (SMD) 0.6, 95% CI 0.4 to 0.7), six months (SMD 0.5, 95% CI 0.3 to 0.7), and twelve months (SMD 0.4, 95% CI 0.1 to 0.6) post intervention. Secondary outcome measures both clinical (lipid levels and blood pressure) and patient centred (quality of life, attitude scores, patient empowerment and self-efficacy) showed no significant improvement compared with control groups (52).

The authors acknowledge the paucity of data retrieved from a rigorous search of the literature. The main reason for this is the ‘low numbers of rigorous RCTs’ explained by the difficulties of reaching the right subject in the right community.

The authors of this meta-analysis also recognise that it is not yet possible to identify which aspects of the culturally-adapted programs make a difference, and more randomised controlled trials are needed. Experts interviewed by us agreed strongly with this conclusion.

### 5.3 Preventing Type 2 Diabetes in Culturally and Linguistically Diverse Communities in NSW

In 2007, the NSW Department of Health commissioned a report ‘Preventing Type 2 Diabetes in Culturally and Linguistically Diverse Communities in NSW’ (34). The purpose of the report is to inform the development of policies and programs that address diabetes prevalence and risk in CALD populations in NSW.

A review was conducted of national and international peer reviewed publications, governmental and non-governmental organisation reports and websites to obtain data and information regarding prevention programs and epidemiological data for T2DM in CALD populations. This report identified the existence of tools designed specifically for use with individuals with T2DM from CALD populations, but there were no resources for preventing diabetes. This report also determined a deficiency in systematic evaluation techniques used by local diabetes prevention programs. Measures such as long term follow-up, assessment of progression towards diabetes, and physical or biochemical risk factors were lacking. These evaluation gaps were highlighted as contributing significantly to the overall ineffective approach taken to preventing T2DM in CALD populations in Australia.

The recommendations from the report for the development of successful diabetes prevention programs in CALD populations included:

- Obtaining relevant data about the populations at risk;
- Awareness of existing programs and resources which address the risk and prevalence of T2DM in CALD populations;
- Identifying risk factors specific to each CALD population;
- Investigating CALD specific group attitudes to health behaviour;
- Developing CALD programs which are:
  - Consultative (i.e. involving the target community),
  - Collaborative,
  - Practical (i.e. recognising cultural barriers and social structures),
  - Culturally appropriate;
- Utilising culturally appropriate program evaluations and employing long term follow-up which is culturally specific
5.4 Diabetes: Australian Facts 2008

This report contains the most recent national data on prevalence, incidence, risk factors, and complications of diabetes (15). The key findings are:

- Diabetes is one of the leading chronic diseases in Australia;
- The prevalence of diabetes is continuing to increase over time;
- Diabetes is a disease which reduces quality of life and has serious health complications and substantial health system costs;
- Diabetes can be controlled and prevented via modified risk factors, and
- Some population groups are at much higher risk than others. This includes those people from CALD backgrounds.

‘Diabetes: Australian facts 2008’ also includes specific information for CALD populations. It raises the issues that CALD communities face regarding T2DM, which include:

- Increased prevalence of diabetes,
- Increased prevalence of risk factors for diabetes,
- Increased prevalence of complications and hospitalisations due to non-treated diabetes, and
- Increased death rates due to diabetes.

5.5 Behavioural, social and cultural theories

5.5.1 Health Action Process Approach (HAPA)

In the Life! program a combination of different behavioural models are used to deliver health education and counselling to the participants who are identified as being at high risk for diabetes. The Health Action Process Approach (HAPA) model and self regulation theory are used in the Life! program to set individual goals and to motivate individuals to progress from intention to actual behaviour change (53-55). As shown in Figure 3, the HAPA model comprises two distinct phases; ‘motivation formation’ and ‘action’.

The Health Action Process Approach

![Figure 3 Health Action Process Approach or HAPA model](image)
Motivation Formation

In the motivation formation stage, participants must reach a point where they are considering the possibility of change. Elements of social cognitive theory such as risk perception, motives, self-efficacy in decision making and outcome expectancies (or motivation) contribute to the development of goal intentions (55).

Action

During the second stage or action phase, implementation intentions assist individuals to realise their goals and start working towards them. The crucial aspects of this phase include perceived self-efficacy, skills for overcoming barriers, and making use of resources (55). Life! program, participants should be able to activate self-regulatory strategies in order to:

- Acknowledge that they are at risk for type 2 diabetes;
- Learn that the disease can be prevented by lifestyle changes;
- Gain confidence in their ability to change;
- Decide to change;
- Plan where, when and how to make changes (or action planning);
- Learn how to avoid barriers and use resources (or coping planning), and
- Learn how to recover from relapses.

Internationally recognised measures (trialled in GGT DPP) of risk perception, efficacy expectations, intention, goal planning and social support will be used to develop CALD Life! programs that are culturally appropriate in design, implementation and evaluation (54, 56-58). As previously mentioned, some elements of the HAPA remain uncertain in regard to the diversity of cultures of participants in CALD Life! programs. Specific factors such as self efficacy, internal locus of control, illness models, risk perception and outcome expectancies remain to be investigated when considered in this context. For example, locus of control about one’s health may differ across groups of different religious orientation, and the centrality of the family may be more prominent in collectivist cultures.

5.5.2 HAPA model and its applicability for CALD

The theoretical basis of behaviour change in the current Life! program is the HAPA. There is much literature surrounding the HAPA model and its effectiveness in behaviour change. Some literature has also been published regarding the HAPA model’s applicability as a universal construct, and subsequent use in diverse ethnic populations (57, 59-64). The GGT UDRH has contacted Professor Schwarzer who is a world recognised expert on the HAPA model. He believes that it is universally applicable even though it has only been tested in the Korean, German, Finnish and several English speaking populations (65). Several applied health psychologists, such as Dr Pilvikki Absetz, who designed the Finnish diabetes prevention implementation trial have pointed out that its universal applicability has not been tested (66). The literature indicates that perceived self-efficacy and an optimistic sense of personal competence is a pervasive phenomenon accounting for motivation and accomplishments in human beings. One study reported the applicability of general perceived self-efficacy in over 25 countries (63). That study also concluded that further investigation is needed to account for cross-cultural differences and gender differences when using the various components of the HAPA model in CALD populations (63). None of the other theories underlying the Life! program such as risk perception, internal locus of control, planning and feedback have been tested for use in specific CALD communities in diabetes prevention programs. Therefore, there is little evidence for or against the use of the HAPA model for diabetes prevention in different cultures.
5.5.3 Social Determinants

A literature search on the social determinants of health suggests that the processes and factors which influence health behaviour occur within the broad social, physical, political, economic, structural and cultural environments (67-75).

Biopsychosocial model

Engel has proposed a biopsychosocial model of health, whereby societal factors are viewed as fundamental contributors that affect behaviour through social, psychological and ultimately biological pathways (68, 76-78).

Ecological model

Bronfenbrenner has also developed an ecological view of health, whereby multiple environments (ecologies) directly affect health through multilevel (e.g., regions, cities, and neighbourhoods), multi-structural (e.g., physical environment, socioeconomic status, and social capital), multi-factorial (e.g., diet, physical activity, smoking, and stress), and multi-institutional (e.g., local government, family, and local agency) contexts, which are interdependent of each other and multi-causal in nature (67, 79).

Both the Engel and Bronfenbrenner models of health refer to the social determinants, and multiple and interacting pathways that influence health behaviour. This view of health behaviour is particularly relevant to CALD populations, as the process of acculturation and migration and their effects on health lie within the social, physical, economic, political and cultural environment, and not necessarily with the individual, as many of the health behaviour change models propose (69, 74).

Psychological and psychosocial models of behaviour change may not adequately account for cultural differences in practices and beliefs about health and wellbeing, illness management and prevention (67). These fundamental differences between and across cultural groups imply that a behaviour change model alone may not be applicable to CALD populations for prevention of diabetes.

Synergy in developing a CALD Life program may be achieved by taking the most promising concepts from each of the models discussed (HAPA & Social Determinants) and integrating them for use with CALD populations.

5.5.4 Cultural models of health and illness

Cultural models of health and illness affect the way individuals perceive, react to, and manage chronic diseases and illness. Professor Arthur Kleinman, a medical anthropologist at Harvard, maintained that culture influences the experiences of symptoms, the expressions used to describe them, diagnosis of disease, clinician-patient interactions and relationships, the practices of professionals and decisions about treatment (80). Essentially culture shapes health beliefs, behaviours and values. The resulting health practices are a complex combination and interaction between culture and the economic, political, social, biological and psychological conditions of the individual (80, 81).

Kleinman uses the term ‘illness meanings’ to describe how individuals make sense of an illness, what they label it, how they treat it, and how the illness is ‘lived’ in the multiple worlds of the person (81).

A complementary concept to that of Kleinman’s ‘illness meanings’ is Leventhal’s Self-Regulation theory and Common Sense Model in which ‘illness representations’ are a central component. ‘Illness representations’ are individuals’ beliefs and expectations about an illness, which then determine the assessment of the illness and corresponding health behaviour (82). Illness representations are divided into three interrelating constructs. The first one is built from the general lay pool of information from previous social and cultural knowledge of the illness. The second construct comes from external
information in the social environment and the third from current experiences with the illness (82). The factors that comprise an illness representation also take into account individuals’ views of their environments and of themselves (83). While illness representations determine an individual’s definition of the disease threat, coping strategies, health behaviour and illness outcomes (83), how these translate into practice will be determined by the cultural and social context in which the person is engaged.

In addition to Kleinman’s and Leventhal’s work on models of health and illness, Hofstede’s research has demonstrated that there are national and regional cultural groupings that affect the behaviour of societies and organisations. He has developed a model that identifies five primary dimensions to assist in differentiating cultures: Power Distance, Individualism, Masculinity, Uncertainty Avoidance, and Long-Term Orientation (84).

Hofstede’s analysis for the Australian context resulted in a high score on individualism. The Individualism (IDV) index for Australia is 90, the second highest score of any country in Hofstede’s surveys from around the world. This has implications for the high level of cultural diversity that exists within Australia, as many CALD communities originate from countries with low individualism scores, such as China (IDV=20). The low Individualism ranking represents a close and committed member ‘group’, be that a family, extended family, or extended relationships (84).

Power Distance is the extent to which less powerful members of communities or families accept and expect inequality in power distribution (84). This can specifically affect the doctor-patient relationship or client-organisation relationship, where acceptance of diagnosis and treatment adherence for particular illnesses may differ between different CALD communities, and hence the differences observed in health outcomes.

Long Term Orientation is described as values associated with thrift and perseverance commonly witnessed in Western cultures. Conversely, Short Term Orientation is associated with respect for tradition, fulfilling social obligations and protecting one’s ‘face’. Short Term Orientation is associated with most Asian countries that are founded in the teachings of Confucius (84). This dimension directly influences factors such as individual responsibility for health, locus of control over health behaviour and health beliefs and practices.

One study of cultural models of health and illness in relation to diabetes prevention and management in the Australian context, has demonstrated the interplay between individual behaviour, societal and environmental factors (85). Two studies within the Australian Turkish and Arabic populations have shown that people construct their own self care from an emotional base which is partly shaped by culture and by the environment in which they live (86). In another study in these particular CALD communities the link between culture and the social context was demonstrated. Diet and exercise practices were influenced by cultural factors, but shaped by environmental concerns about public safety and food quality. The authors concluded that the influence that culture has on health beliefs and practices was less than the effect of the social and environmental forces which limited the ability of optimal health behaviours to take place. (85).

This Australian research is in line with international evidence on personal models of health and illness in relation to diabetes in CALD populations, which has shown that effective health behaviour programs need to take into account the culture in which the individual was raised. Cultural factors such as concepts of illness, health, death, meaning of medication, locus of control and views of family and community influenced health behaviour, and can determine how well an individual will be able to effectively reduce the risk of diabetes (87).

The differences within and between cultures provide pointers to the diversity of health practices, decisions, self-management and preventative behaviours observed in CALD populations in Australia.
6. Interviews

Twenty-three key informants were selected for interviews because of their knowledge and work in the area of T2DM prevention, management, or health education in CALD populations in Australia, Finland, Germany, the United Kingdom or the United States. These interviews provided additional information that was not available in the published literature. The major themes of discussion focused on health issues in CALD communities, local T2DM prevention programs in CALD populations, the effectiveness of these programs, and resources or techniques used to conduct these programs. The present summary highlights the essential ideas brought out through these interviews. Details of key informants are shown in the appendix.

Most of the CALD communities that are targeted in Australia for health prevention, management and education programs are: Arabic or Turkish speakers, Chinese (conducted in Mandarin and Cantonese), Italian, Greek, Vietnamese, Indian and Sri Lankan groups. In the United Kingdom, the programs are aimed at South Asians, especially those originally from India, Pakistan and Bangladesh. Low literacy is more common in these groups than among Australian South Asians. In the United States, the main groups are Afro-Caribbean, Chinese, Vietnamese, American Indian and Hispanic.

Comparisons between British and American and Australian experience is complicated by differences in the composition of CALD communities, their educational and socioeconomic backgrounds.

The existing CALD programs reviewed from the interviews consisted of health prevention education and management in Australia, the UK and US, and were open to every adult over 18 years. Most of the programs were related to T2DM.

All interviewees acknowledged the importance of being part of a CALD network, and having a good understanding of the culture of the community where the program will be undertaken would be an asset for running such programs. All of the interviewees said that conducting CALD programs requires a great personal commitment; it becomes a ‘personal involvement and crusade’ and commitment to the programs is a way of ‘giving something back to the community’. The commitment is stronger if the person running the program comes from a CALD background and is a trusted member of the community. Cultural awareness training for facilitators who are in charge of a diabetes prevention program in CALD communities is fundamental. Some of the interviewees were critical of the lack of knowledge of health workers and the lack of respect that the ‘westernised medical profession’ accords to ‘traditional medicine’.

Recruitment of participants and promotion of programs occurred mainly through ethnic radio advertisements and word of mouth within the CALD community.

Bilingual facilitators or health workers were involved in running such programs, and proper translated material is necessary for the success of the program. The translation should take into account not only the language, but also cultural aspects of diet and physical activity and health beliefs, as well as the level of literacy. In most cases a focus group was conducted to determine whether the materials used in a program were correctly translated and culturally appropriate. Health literacy and general literacy of the CALD group needs to be accounted for in the program, such as simplifying terminology and supporting the main text with models of foods, pictures or pictograms. Also, the sessions should be non-directive, interactive and not ‘lecture style’.

In CALD programs, the group structure works well because of the opportunities for social interaction among participants. In New York, Hispanic groups spent half their time in social
interaction and participants believe that is their illness model, but health professionals might fail to recognise it. In addition, facilitators welcomed the attendance of family members during programs and noted that they offered a good ‘back-up’ for lifestyle changes being undertaken by participants. Overseas programs often recognise that individual participants won’t make lifestyle changes without the full involvement of the family in the program. All interviewees acknowledged the effective presence of a family member in CALD programs. Reflecting Power Distance, some community programs have successfully used community leaders.

Most of the programs that have been run were not developed according to particular cognitive or behavioural theories, or indeed any theories of behaviour change. To do so would have required more expertise, time and funding than was available. In the end, these approaches are short-sighted and unsustainable.

The main limitations that were described by the interviewees were lack of accurate demographics of CALD populations related to T2DM and, for the programs that were conducted, lack of time, funding, evaluation, skilled workers, resources, communication and interaction between the different programs.

The absence of accurate demographics of CALD populations can be adjusted by a broad network into the CALD community and the use of LGA data. Each LGA has publicly available information regarding the demographic of the people within the area. This includes country of birth, age, English proficiency, education, and employment (based on Census data). Health professionals working with certain CALD groups should have knowledge of the community with which they are working.

Interviewees also suggested sources of information from other programs, such as those conducted by the Cancer Council of Victoria. This organisation has considerable expertise in running programs (especially ‘Living with Cancer’) with and for CALD communities.

Programs were usually run on an ad hoc basis, were dependent on funding, were run by individual workers in a community based setting, and were run for a short period of time. Without defined interventions and formal evaluation it is difficult to know what these programs have achieved. It is also difficult to connect to these groups unless the facilitator is trusted by that CALD community. According to interviewees, lack of communication and cooperation between community health centres and facilitators made previous programs appear less successful than they may have been in reality.

Regarding the evaluation, all interviewees agreed that there are poor systems for evaluation of CALD programs in Australia. Where an evaluation has been performed it was mainly a ‘process evaluation’. No one could point to hard outcomes. They all conceded that there is a need for proper evaluation, more research should be done, and they suggested that the intervention should be evaluated by an external organisation.
7. Conclusion

T2DM is one of the major chronic diseases affecting the Australian population, particularly for those people from CALD backgrounds. A review of the international and national literature on diabetes prevention, management and education has been undertaken; of which there has been little published information specifically for CALD programs. Key informant interviews and site visits with local and international experts in T2DM prevention, management and education for CALD populations have also provided additional information on this subject.

This report proposes the development of CALD Life! strategies which are specifically designed to meet the needs of those who are at most risk in the community. The CALD Life! strategies have been developed with a complex intervention methodology and with a thorough evaluation component. These strategies are divided into two phases. Phase One includes training for Life! facilitators regarding cultural issues, such as diet, lifestyle, risk perception, locus of control and models of health and illness. Phase Two is comprised of a pilot CALD Life! program to be run with English speaking CALD communities, and following the pilot would be the roll out of a CALD Life! program for those CALD communities who have no or low levels of English proficiency.
8. References


# Appendix 1 – Key Informants

## Australia

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>Workplace</th>
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### United States

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