

Tackling Indigenous Smoking and Healthy Lifestyle Programme Review: A Multi-criteria Decision Analysis

Report 3 of 3

21 November 2014

Authors

Dr Penney Upton
Professor Rachel Davey
Professor Mark Evans
Dr Katja Mikhailovich
Lee Simpson
Davina Hacklin

The Decision Context

Chronic disease contributes two-thirds of the health gap between Aboriginal and Torres Strait Islander people and other Australians. Tobacco smoking is the most preventable cause of ill health and early death among Indigenous Australians¹, and is responsible for around one fifth of deaths among this population and 12% of the total burden of disease and injury. Tobacco related illness is estimated to cost the Australian economy \$31.5 billion each year. Chronic disease can be prevented, delayed and better managed through active intervention, effective management and lifestyle change.

The University of Canberra has undertaken an independent review of the Department of Health's approach to tobacco reduction and the prevention of chronic disease for Indigenous Australian populations. The review is intended to assist the Department in providing advice to Government on options for renewed action to reduce the impact of smoking and other risk factors on Indigenous Australian people and communities. This report is the final in a series of three reports undertaken as part of this review.

The Department currently addresses these issues through the Tackling Indigenous Smoking (TIS&HL) programme, which aims to reduce smoking rates, the incidence of chronic disease, and early death in Indigenous Australian communities. The programme delivers community education activities and interventions to reduce the uptake and prevalence of smoking, improve nutrition and increase physical activity, as these are risk factors for many preventable chronic diseases.

The national programme has three objectives:

1. Address high smoking rates by reducing the uptake of smoking amongst children and young people
2. Support smoking cessation
3. Promote healthy lifestyle

It primarily fulfils these aims through community education activities, implemented by the new workforce (RTS&HL teams) whose remit is to:

- a. Reduce the prevalence of smoking (through prevention and cessation);
- b. Improve the understanding of the health (and economic) impacts of smoking;
- c. Improve nutrition and increase physical activity (as also risk factors for preventable chronic disease).

The purpose of the Review is therefore to provide advice to the Department on the merits of a redesign of the TIS&HL Programme. The Review is intended to be forward-looking, with options provided to the Department on how best to deliver effective, evidence-based approaches to prevent chronic disease and its ongoing impact, with a focus on reducing tobacco use, while also continuing to cover issues such as nutrition and physical activity.

¹ The collective term, 'Indigenous Australians' will be used to refer to the First Nations' people of Australia – Aboriginal and Torres Strait Islander peoples and no offence is intended. It is also acknowledged and respected that Aboriginal peoples and Torres Strait Islanders constitute many nations, language groups and cultures.

Any recommendations will have a significant impact on Indigenous Australian communities, in terms of the workforce which has been developed as a direct result of this programme, and the impact on individuals in terms of quality of life, wellbeing, longevity and so on. It is also very clear from the stakeholder consultation that the issue of smoking has become important to local communities, and has acted as an impetus for change. Stakeholders perceive it as imperative that this momentum is not lost, so as not to undo all the positive progress made to date.

Methodological Approach

At a time of fiscal constraint, rising expectations and growing demographic pressures, decision-makers need appropriate methods which can help them to decide how best to allocate resources efficiently and effectively, in order to achieve positive outcomes for their programmes and services. The process of setting objectives, generating options, and deciding on the “best” option can be achieved using different methods; however one approach that has become increasingly popular with policy makers is multi-criteria analysis (MCA).

Multi-criteria analysis (MCA)

MCA is deemed to offer a sound methodology for promoting a good decision-making process and provides a structured method for determining both the criteria by which a range of options will be assessed, and the relative importance of each of the criteria. This enables a single preferred option to be identified. The judgement of the decision-making team in establishing explicit objectives and criteria, scoring, and weighting is a critical feature. MCA has a number of strengths including an:

- Ability to incorporate a wider range of criteria (e.g. social, ethical, environmental) than a typical financial analysis, and unlike a cost-benefit analysis, does not require monetisation of all costs and benefits;
- A systematic approach to appraising and comparing options with a wide range of quantifiable and non-quantifiable impacts;
- Openness and explicitness - the choice of objectives and criteria are open to analysis and change if they are felt to be inappropriate;
- Flexibility in terms of choice of options, criteria, weighting, and who is involved in the decision making;
- Development of shared understanding among decision-making group on objectives, options, criteria, weighting and scoring.

Multi-criteria analysis establishes preferences between options by reference to an explicit set of objectives agreed by the decision-making group, and for which the group has agreed measurable criteria to assess the extent to which objectives have been achieved. Typically there may be 6 to 20 criteria – which can be grouped to produce a set of broad criteria, each with associated sub-criteria. Criteria need to capture the key aspects of the objectives and be operational, relevant and discrete.

The key tool is the development of a “performance matrix” where each row describes an option, and each column describes the performance of the options against each criterion. This can be the final ‘product’ of the analysis, leaving the decision-makers to assess the extent to which their objectives are met by the entries in the matrix. When the performance matrix is

completed, any options which perform weakly can be ruled out. There may be trade-offs between different criteria, so that good performance on one criterion compensates for weaker performance in another.

The option appraisal develops a set of criteria against which to assess the different options and undertake a comparative assessment, and includes factors such as appropriateness, effectiveness and efficiency.

There are five key steps in MCA:

1. Establish the decision context: what are the aims of the analysis, who are the decision makers, and other stakeholders?
2. Identify the options.
3. Identify the objectives and criteria to be used to compare options, e.g. coverage, cost, availability of an alternative service.
4. Describe the expected performance of each option against the criteria.
5. Examine the results, make choices.

Multi-criteria decision analysis (MCDA) involves two further stages:

- Scoring expected consequences of each option on a scale, often from 0-5;
- Weighting the relative value of each criterion and associated sub-criteria.

One overall value is obtained by multiplying the value score on each sub-criterion by the weight of that sub-criterion and then adding those weighted scores together. A sensitivity analysis can look at the results of changes to scores or weightings.

We used MCDA to:

- Identify the most preferred options from current activities undertaken as part of the TIS&HL programme;
- Prioritise and rank those options;
- Clarify the differences between options;
- Indicate the best allocation of resources to achieve the programme objectives.

MCDA objective

The MCDA objective is to identify the most effective TIS&HL programme activities that will fulfil the programme objectives (1-3) going forward.

Defining the Options

Most RTIS&HL teams have implemented local, community based multi-component interventions. Furthermore, feedback from the consultation (Report 2) demonstrated the extent to which different components within each programme were chosen by each team. It was therefore agreed that in order to best capture the activities of teams, a typology of programmes should be developed (Table 1). These are based on the information provided during the written consultation and interviews. We are confident that this captures all the combinations of activities carried out by RTIS&HL teams, plus those of other initiatives funded separately under the programme (where information is available) including the Quitline enhancement, Murri Rugby League Carnival, Deadly Choices, and the Indigenous Marathon Project. Other funded

initiatives that relate to training or leadership are captured through the assessment criteria (Appendix 1). There are no overlaps between the groupings, and activities have been kept as broad as possible, without creating potential for misclassification.

Table 1: Options for MCDA

1.	Enhanced Quitline
2.	Social marketing + community education events + quit support groups + healthy lifestyle activity programmes (general)
3.	Social marketing + community education events + quit support groups + quit counselling + NRT + nutrition programmes + physical activity programmes
4.	Social marketing + community education events + quit support groups + NRT + nutrition & physical activity programme
5.	Social marketing + community education events + quit support groups + NRT + healthy lifestyle activity programmes
6.	Social marketing + quit support groups + NRT + healthy lifestyle activity programmes (general) + boot camps
7.	Social marketing + community education events + quit support groups + nutrition programmes + physical activity programmes + school intervention + community sports days
8.	Social marketing + community education events + quit support groups + school intervention + community healthy lifestyle activity events
9.	Social marketing + community education events + quit support groups + (NRT) quit advice + nutrition programmes + physical activity programmes + school intervention
10.	Social marketing + community events + (NRT) quit advice
11.	Community education events + healthy lifestyle programmes (general) + NRT+ quit counselling + quit support groups
12.	Community campaigns for nutrition

Central to the option appraisal was a focus on:

- Evidence-based approaches;
- Optimising tobacco reduction outcomes through both population prevention and primary health care strategies and strengthening the linkages and the synergies between these;
- Optimising broader healthy lifestyle messages;
- Capitalising on opportunistic contacts with all parts of the primary healthcare system to support smoking cessation;
- Improving efficiency and effectiveness on what can be delivered within existing resources, as well as leveraging support from the broader Indigenous Australians' Health Programme;

- Ensuring an appropriate balance between national, state, regional and local activities and urban, regional and remote locations, along with targeting of priority demographic groups;
- Allowing for workforce capacity, capability and development.

Criteria for Assessing Consequences

The criteria were developed following an iterative process, in order to ensure they were comprehensive and mutually exclusive, covering all areas of interest for decision makers. Firstly, an initial list of criteria and sub-criteria was drawn up and agreed upon by the Department of Health. These criteria were informed by the review of the literature and the consultation with TIS&HL teams and industry experts. A workshop was then undertaken with key members of the Department of Health to establish which of the broad criteria were most important, and to weight these in order to score the options appropriately. Criteria were thus further refined, and group rankings and weighting were agreed through the workshop discussion. All workshop attendees then weighted each sub-criterion independently. The mode of these values was then calculated to provide a final weighting for use in the MCDA (see Appendix 1).

We believe the final list of criteria covers all relevant factors (including appropriateness, effectiveness and efficiency of the options) in order to provide advice to the Department on the design of the TIS&HL programme, and establish how best to deliver effective, evidence-based approaches to prevent chronic disease in the future, with a focus on reducing tobacco use (while also continuing to cover issues such as nutrition and physical activity). A glossary of terms for the MCDA is provided in Appendix 2.

Analysis

The expected performance of each option, on all of the assessment sub-criteria, was described using information provided during the consultation with teams. This was entered into a performance matrix (Appendix 3). Each sub-criterion was then scored on a scale of 1-5, where:

- 1 = performance is poor
- 2 = performance is below average
- 3 = performance is satisfactory
- 4 = performance is good
- 5 = performance is excellent

Where data was missing, either because it was not provided, or because the item was not applicable to the programme, a score of zero was given. Information was often found to be missing because the relevant data has not been collected by programmes as there was no requirement to do so. Missing data therefore provides a useful picture of gaps in monitoring and evaluation processes. It should not however be taken as an indicator that programmes are performing poorly. These scores are shown in Table 2, with the top three performers for each of the broad assessment criteria highlighted in yellow.

Table 2: MCDA Performance Matrix

Criterion	Subcriterion Weighting	OPTION 12		OPTION 11		OPTION 10		OPTION 9		OPTION 8		OPTION 7		OPTION 6		OPTION 5		OPTION 4		OPTION 3		OPTION 2		OPTION 1	
Effectiveness																									
Improved attitudes to smoking	30	0	0	4	120	1	30	5	150	4	120	1	30	1	30	1	30	1	30	1	30	1	30	3	90
Improved attitudes to nutrition	25	0	0	1	25	1	25	5	125	1	25	1	25	1	25	1	25	1	25	1	25	0	0	0	0
Improved attitudes to physical activity	25	0	0	1	25	1	25	5	125	1	25	1	25	1	25	1	25	1	25	1	25	0	0	0	0
Behaviour change smoking - prevent uptake	30	0	0	0	0	1	30	3	90	1	30	1	30	1	30	1	30	1	30	1	30	1	30	0	0
Behaviour change smoking - cessation attempts	30	0	0	5	150	1	30	5	150	4	120	1	30	5	150	5	150	1	30	1	30	3	90	4	120
Behaviour change nutrition	20	1	20	1	20	1	20	4	80	1	20	1	20	1	20	1	20	1	20	1	20	0	0	0	0
Behaviour change physical activity	20	0	0	1	20	1	20	4	80	1	20	1	20	1	20	1	20	1	20	1	20	0	0	0	0
Effectiveness Score			20		360		180		800		360		180		300		300		180		180		150		210
Community Ownership & Engagement																									
Consultation	25	1	25	1	25	1	25	1	25	4	100	1	25	1	25	1	25	1	25	1	25	1	25	0	0
Local involvement in programme design	25	3	75	3	75	3	75	3	75	4	100	3	75	0	0	5	125	3	75	4	100	3	75	0	0
Acceptance of National Leadership	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Use of local workforce	25	1	25	1	25	1	25	1	25	1	25	1	25	1	25	1	25	1	25	1	25	1	25	1	25
Use of local role models/ambassadors	20	0	0	4	80	0	0	5	100	1	20	0	0	0	0	0	0	1	20	1	20	1	20	0	0
Programme attendees	25	4	100	5	125	0	0	5	125	5	125	5	125	5	125	5	125	0	0	5	125	0	0	5	125
Flyers/brochures distributed	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	60	
Local leadership	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Community Ownership & Engagement Score			225		330		125		350		370		250		175		300		145		295		145		210
Implementation																									
Clear purpose & design	25	4	100	4	100	3	75	5	125	5	125	5	125	5	125	4	100	3	75	4	100	5	125	5	125
Effective coordination including initial collaboration	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Clear rules & roles for workforce	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	25	0	0	0	0	0	1	25	
Adequate allocation of resources	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	125	0	0	0	0	0	0	0	0
Equity	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Access to Communities	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	100	0	0	4	100	
Programme monitoring/routine data collection	20	0	0	1	20	1	20	5	100	5	100	5	100	5	100	3	60	3	60	3	60	1	20	5	100
Budgeting	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Meeting deadlines	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C	0	0	0	0	0	0	2	40
Effective support docs & staff training	25	0	0	5	125	5	125	5	125	5	C	3	75	3	75	5	125	5	125	5	125	5	125	5	125
Recruitment of workforce with skills	25	0	0	1	25	1	25	1	25	1	25	1	25	1	25	1	25	1	25	1	25	1	25	1	25
Implementation score			100		270		245		375		250		325		325		460		285		410		295		540
Expectations of the programme																									
Increase community capacity for change	10	1	10	5	50	5	50	5	50	5	50	5	50	4	40	4	40	5	50	5	50	4	40	4	40
Increase workforce capacity	10	0	0	5	50	1	10	5	50	5	50	1	10	1	10	1	10	1	10	4	40	4	40	4	40
Effect behavioural change	10	1	10	1	10	1	10	1	10	1	10	1	10	1	10	1	10	1	10	1	10	1	10	1	10
Local expectations of the programme	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Expectations score			20		110		70		110		110		70		60		60		70		100		90		90
Systems Learning & Adaptation																									
Development of partnerships (including host organisation)	10	3	30	5	50	4	40	5	50	5	50	5	50	5	50	5	50	5	50	5	50	5	50	5	50
Repetition of activities	5	0	0	0	0	0	0	5	25	5	25	5	25	0	0	0	0	1	5	0	0	0	0	4	20
Programme transfer	5	0	0	0	0	0	0	4	20	0	0	0	0	4	20	0	0	0	0	0	0	0	0	4	20
Onward referral	10	0	0	4	40	0	0	0	0	0	0	0	0	4	40	4	40	0	0	0	0	0	0	0	0
Brokering	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Systems score			30		90		40		95		75		75		110		90		55		50		50		90
Overall Score			395		1160		660	6	1730		1165		900		970		1210		735		1035		730		1140

In terms of 'effectiveness', the top three approaches were:

- Option 9 with a score of 800
- Option 11 with a score of 360
- Option 8 with a score of 360

Some options (for example options 12 and 1) scored poorly on this criterion because they focused on one aspect of health lifestyles only (e.g. just nutrition, smoking cessation). These programmes may therefore be effective for the aspect of lifestyle on which they are focused, however because of the objective of the analysis, options with a narrow application will not score highly here.

With regard to 'community engagement' the three most successful approaches were:

- Option 8 with a score of 370
- Option 9 with a score of 350
- Option 11 with a score of 340

No single Option scored particularly highly; this may be because no information was provided on issues such as local and national leadership. Furthermore, all Options scored low on the use of a local workforce; this was because whilst everyone agreed that they recruited locally, no specific detail was provided.

The three most successful approaches with regard to 'implementation' were:

- Option 1 with a score of 540
- Option 5 with a score of 460
- Option 3 with a score of 410

Again, there were a number of gaps in the data. In particular no information was provided on 'initial co-ordination', 'equity', 'access to communities', 'budgeting' and 'meeting deadlines'. In addition, few programmes provided information on workforce rules and allocation of resources. Finally, no one Option scored highly on recruitment of workforce with skills, with the majority describing problems recruiting and retaining skilled workers. However in contrast, most programmes scored highly on 'clear purpose and design'.

In terms of 'expectations', the three top scorers all achieved the same score and were:

- Option 11 with a score of 110
- Option 9 with a score of 110
- Option 8 with a score of 110

On this criterion, the majority of Options scored highly on 'increasing community capacity for change', whereas the main gap in information concerned 'local expectations of the programme'.

Finally on the criterion 'systems learning', the top scorers were:

- Option 6 with a score of 110
- Option 9 with a score of 95
- Options 11,5,1 with a score of 90

Scores were similar on this criterion, with most Options scoring highly on the development of partnerships. In contrast, no information was provided on brokering.

The three Options that received the highest total score were

- Option 9 with a score of 540
- Option 5 with a score of 460
- Option 8 with a score of 410

Successful Options

The most successful typology was Option 9, which scored in the top three in four out of five criteria groups. This Option included the following activities:

- Social marketing
- Community education events
- Quit support groups
- Nicotine Replacement Therapy (NRT)/quit advice
- Nutrition programmes
- Physical activity programmes
- School interventions

This Option's success was due in particular to the impact made on attitudes and behaviours related to smoking and healthy lifestyle choices ('effectiveness'). Furthermore, although this Option did not score in the top three in terms of 'implementation', it did score highly on the sub-criteria 'clear purpose and design' and 'programme monitoring'. Indeed it was the monitoring and evaluation of impact that allowed this Option to demonstrate its effectiveness and impact on change.

Case studies for two of the programmes included under Option 9 are provided in Boxes 1 and 2. These case studies provide background information about what makes the programmes effective, as well as examples of programme components.

Box 1: 'Deadly Choices'

'Deadly Choices' is an innovative, multi-component health education programme developed by the Institute for Urban Indigenous Health (IUIH) in South East Queensland (SEQ). The programme focuses on reducing risk factors around chronic disease and encouraging the uptake of 'Health checks' through a number of means including community events, a school programme, and a community group programme, all of which are supported through a comprehensive web-page (<http://www.deadlychoices.com.au/>) and social media sites (Facebook, Twitter and Instagram). The team work closely with other programmes and providers in the region, and the package also includes the provision of culturally relevant workshops on tobacco use and smoking cessation for healthcare professionals, cessation clinics for clients attending Aboriginal Medical Services and a cooking programme, 'Good Quick Tukka'.

Why it works

The programme was launched with a high impact multi-media advertising campaign (television, bus wraps, posters and flyers) which used strong culturally relevant messages about the impact of health choices on individual and family wellbeing. The TV adverts can still be accessed on the 'Deadly Choices' web-page. Celebrity ambassadors from sport help give the programme a high profile; however a key aspect of this programme is the way in which it empowers participants of all ages to become positive mentors and role models in their community through the application of a strengths-based approach.

This strengths-based approach² most certainly underpins the programme's success. A philosophy for supporting individual or group level change (e.g. families or communities), the strengths-based approach identifies and builds upon the existing psychosocial resources of individuals and communities. It therefore recognises people's resilience and focuses on their potential and capacity for change, rather than their limitations. It provides a structure for working in partnership with individuals or groups to identify and solve a problem, thereby enabling individuals, families, and communities to take control of their own lives in meaningful and sustainable ways.

In addition the flexible team approach and the adaptable nature of the materials means that 'Deadly Choices' can be run almost in any community setting giving it exceptional reach. The programme has been run very successfully in numerous settings including schools, a youth detention centre, adult community groups and sports groups, with programme content being adjusted to the assets, needs and abilities of the participants. The program has also been found to be fun and relevant for participants. 'Deadly Choices' has been integrated into the curriculum of several schools in SEQ, and has been taken up by Indigenous health and community services in other Commonwealth States.

The Core Programme

The core programme comprises seven sessions, each running for 90 minutes and is typically delivered once a week over a seven-week period. These timings can however be tailored to the specific needs of the group. Sessions include an ice-breaker activity, an education component and participation in physical activity. The education component covers one of seven topics:

- Leadership;
- Chronic disease;
- Physical activity;
- Nutrition;
- Smoking;
- Harmful substances;
- Health services.

At the final session, participants are encouraged to have an Indigenous health check. For school programmes a medical van staffed by local Indigenous Australian clinic staff might be organised so participants can have a health check at school, or health checks can be organised at the local Indigenous health clinic with transport provided.

The physical activity element of the programme emphasises participation, increasing self-efficacy and teamwork. Traditional Indigenous games may be included, thus focusing on the cultural assets of participants. Sessions are facilitated by Indigenous Healthy Lifestyle Workers considered to be role models in the community. The same workers facilitate sessions to build relationships and trust. Participants attending all sessions receive a 'Deadly Choices' football shirt as a reward for their efforts and to encourage ongoing engagement.

²McCashen, W. (2005). The Strengths Approach. Bendigo, Victoria, Australia: St Luke's Innovative Resources

Box 2: 'Keep it Corka'

This programme was developed through a partnership between the Aboriginal Health Council of South Australia (ACHSA) and Murray Mallee Community Health to raise awareness of links between lifestyle behaviours and chronic disease, motivate lifestyle behaviour change and provide practical knowledge on how to make these changes. The 'Keep It Corka' programme provides a range of activities including:

- Programmes in schools which emphasise why not to take up smoking;
- Education programmes in prisons and established community groups;
- Targeted quit support groups;
- Physical activity sessions and events;
- Community healthy lunches;
- Cooking and gardening courses focused on healthy eating.

Activities and events are supported by printed educational materials (e.g. calendars, posters, cookbooks and booklets), social media (Facebook) and practical promotional items (e.g. caps, shirts, sports towels).

Why it works

The programme emphasises the role of the community for realising behavioural change. Firstly the team undertakes local consultation to determine what sort of activities the community want to see within programmes to ensure participation. For example, members of a Yoga and Wellness group requested the inclusion of hydrotherapy sessions; this was provided and the sessions proved to be well attended and recommended to others. Using local ambassadors and their testimonies also provides a credible way of connecting health messages with communities. Choosing individuals who are respected in their community, both male and female, who represent a range of ages and social backgrounds, and are committed to the cause they are promoting is key to the effectiveness of this approach.

Contributing to the organisation and running of established community days (e.g. National Close the Gap Day, NAIDOC Week activities, sports carnivals) is also an effective means of both engaging and educating local community members. The 'Keep it Corka' team run health promotion stalls at these events, deliver advice on lifestyle changes including smoking cessation, and provide healthy catering. The development of strong local partnerships are essential for the effective running of these collaborative events, and the team have partnered with a variety of local groups including medicare locals, related programmes such as OPAL (Obesity Prevention and Lifestyle) and even Country Arts SA.

It is this creative and innovative approach to delivering health care messages that has enabled the programme's reach within the communities it serves; for example, the team worked with Country Arts SA to run a series of workshops for schools and community organisations which explored health and wellbeing issues for Aboriginal people through the creation of brightly coloured masks and the decoration of umbrellas. The umbrellas and masks were subsequently used to create a strong visual presence at the 2014 NAIDOC week marches.

Examples of innovation

- During August and September 2014, the 'Keep it Corka' team ran a 10,000 step challenge for local work places. The challenge took place over 6 weeks, during which time participants were kept motivated with daily hits and tips delivered by email, and weekly healthy eating recipes;
- A major project was the creation of a healthy cookbook featuring recipes from different Indigenous Australian communities from across South Australia. To promote this cook book the team facilitated 'Keep it Corka' cook offs in a number of communities. Teams of two - one child and one adult would compete, cooking healthy food from the cookbook together;
- Establishing exercise groups such as basketball clinics and walking groups, subsequently identifying local people to continue these groups in the team's absence, thereby building local capacity and ensuring community ownership.

Options 5 and 8 were also highly successful, and as shown in Table 3, included some of the same activities as Option 9, in particular:

- Social marketing
- Community education events
- Quit support groups

Table 3: Activities carried out by the top three options

Activity	Option 9	Option 5	Option 8
Social marketing	*	*	*
Community education events	*	*	*
Quit support groups	*	*	*
NRT/quit advice	*	*	
Nutrition programmes	*		
Physical activity programmes	*		
Healthy lifestyle activity programmes		*	*
School interventions	*		*

Option 5 also had 'NRT/quit advice' in common with Option 9, and Option 8 shared 'School interventions'. The differences between the programmes concerned the types of healthy lifestyle programmes that were being run. Thus Option 9 kept nutritional and physical health activities separate, whilst Options 5 and 8 ran these within more generic 'healthy lifestyle' programmes, or community activity events.

Overall, the findings from the MCDA in terms of what works, support the appropriateness of the recommendations arising from the developmental research which informed the TIS&HL programme (IPSOS-Eureka, 2010)³. The outcomes of this large scale qualitative research programme led to the recommendation that multi-faceted interventions, which should include social marketing campaigns, were necessary to challenge the normalisation of smoking and beliefs around smoking/quitting process in Indigenous Australian communities. This is also in line with the Rapid Review findings (Report 1), which identified targeted, culturally sensitive social marketing campaigns and community designed educational activities, as the most effective way of influencing individual attitudes and social norms. It appears from the MCDA that the combination of such activities does indeed support the attitude shift that result in community level behaviour change (e.g. an increase in smoke-free environments) and to demands for individual support to quit. Following this up by providing the advice and support for 'would be quitters' is also clearly important, and allows a seamless service to be provided.

Developing partnerships with local services also appears to be a key feature of successful Options. This is essential if individuals are to be able to continue their quit journey successfully. Effective Options engaged in quit support and two even provided advice around NRT; prescribing and dispensing NRT is however exclusively a clinical activity. Nevertheless, it has been proposed that NRT use would be more effective if dispensed by the TIS&HL teams,

³ Ipsos- Eureka (2010). Developmental Research to Inform the National Action to Reduce Smoking Rates Social Marketing Campaign. Prepared for the Department of Health and Aging.

as they would be able to build upon the good relationships they have developed with community members to ensure treatment concordance⁴.

It also evident that the active participation of community members, particularly through involving them in programme planning and design, as part of the workforce, or as role models/ambassadors, is vital for ensuring programme participation and impact.

Key factors for success and barriers to implementation

A number of common elements for the success of programmes funded by the TIS&HL Programme were identified during the telephone interviews; these factors will have been important for ensuring the achievements of the Options outlined above. These features included:

- Flexibility of the funding;
- Ability to adjust the programme to suit local contexts and requirements;
- Training of and engagement of a local workforce;
- Effective use of role models and social media;
- Collaboration.

All telephone interviewees highlighted the positive impact that the flexibility in the funding had on their programmes as key to enabling diversity in programme design to match the needs of individual communities. However, the flexibility appeared to be a double-edged sword; although all telephone interviewees expressed the positive impact that the funding flexibility allowed them, they also all indicated that a programme framework that included clear indicators of success and reporting requirements would have been beneficial.

Thus, one of the main barriers to success identified during telephone interviews was the lack of framework or structure for programmes that included objectives, key performance indicators, evaluation and reporting needs. It is however, likely that this was less of an obstacle for the most successful Options as identified by the MCDA. These Options were led by teams who recognised the importance of monitoring the impact that this flexible approach was having on the community. This will have enabled these programmes to reflect on the activities undertaken and develop these in response to evidenced local need, thus enhancing their effectiveness further.

This should also be borne in mind when considering the outcomes of the MCDA. Where data is missing or limited, it may be that this indicates poor performance. However it is also possible that a programme has been effective, but is unable to demonstrate this. We found for example, that often teams indicated that they had been successful on a criterion (e.g. changing attitudes to smoking) but were unable to provide even anecdotal evidence that this had occurred.

⁴ In medicine, concordance indicates that patients/clients and professionals work together to agree on the therapeutic process. It thus implies a more active role for the client than traditional terms such as compliance and adherence. This model – where client and professional work together as equals - is, we suggest, the best way to support appropriate use of NRT.

Methodological Innovation and Limitations

Multi-criteria decision analysis proved to be a particularly effective tool of action learning research. It helped us to gain clarity in terms of programme goals and to reach agreement with key stakeholders and decision makers on criteria for evaluating the qualities of different programme interventions. A task driven two hour workshop was convened for this purpose with the Department. The aim of the workshop was to draft a set of criteria and associated indicators for evaluating the progress or otherwise that the programme is making towards achieving its aims. The workshop task was organised into four stages:

1. Workshop participants were asked to identify key criteria for evaluating programme goals. Criteria for assessing impacts needed to be comprehensive and where possible mutually exclusive, covering all areas of interest to the TIS&HL programme. They selected community ownership and engagement (2), effectiveness (1), implementation (3), programme expectations (4) and systems learning and adaptation (5).
2. Using an Excel spreadsheet workshop participants were asked to rank each criterion, giving '1' to the most important and to assign to each criterion a group weight out of 100.
3. Workshop participants were then invited to assign a set of indicators to each criterion (e.g. implementation – clear purpose and design, effective coordination, effective monitoring, clear operational roles and rules, adequate allocation of resources etc.).
4. Finally, they were asked to give each indicator its own weighting. Weights can take on any value between zero and the maximum of the weight given to the criterion. For example, if you assigned a criterion (e.g. implementation) a weight of 15, the weighting of the indicators can range from 0 to 15.

After each task a deliberation took place on the findings and a consensus position was reached. The deliberative process provided us with unique insights into different stakeholder perspectives on what those criteria should be and which ones they considered to be most important. For example, those with an operational focus tended to privilege process indicators and policy elites outcome-based indicators. The list of criteria and their relative importance is provided in Appendix 1 and should provide a useful contribution to future work on programme monitoring and evaluation.

In retrospect, it proved difficult to complete the task in one workshop. The process would be improved by organising the task into two workshops – one focusing on criteria and one on designing indicators – and to have asked participants to prepare their responses in advance so more time could be spent on deliberation. Nonetheless, we were still able to complete the task with a high degree of success demonstrating the merit of the method in making sense of complex interventions.

However, the caveat to this is the use of MCDA to compare interventions with somewhat different, albeit related remits. Thus, as noted previously, some Options scored poorly on the first criterion because they focused on one aspect of health lifestyles only (e.g. a focus on tobacco control only). Furthermore, for Option 1, certain aspects of the final criterion ('Systems learning and adaptation') were also not relevant to the programme remit. As already highlighted, these Options may well be very effective for the aspect of lifestyle on which they are focused, but will not score highly when compared to programmes focused on the broad

spectrum of healthy lifestyles. Removing the sub-criteria which are irrelevant to these Options, and calculating the scores across the matrix in order to compare like with like, produces very different results for Option 1 specifically. Option 1 (Quitline) is focused on smoking cessation, and does not include advice for nutrition or physical activity. Brokering and onward referral are also not relevant to Quitline's remit. Removing these irrelevant sub-criteria gives Option 1 a score which places it in the top three Options (along with Options 9 and 5). This suggests that Quitline enhancements have in fact been effective for tackling Indigenous Australian smoking. Box 3 provides an overview of these Quitline activities.

Box 3: Quitline enhancement

Quitline is a state and territory wide evidence-based telephone counselling service for those seeking to quit tobacco smoking. However this service is poorly used by the Indigenous Australian population. In order to address this gap in services, states and territories have employed Indigenous Australian liaison teams/co-ordinators to:

- Develop networks, branding and a strong identity with Indigenous Australian populations;
- Build understanding of Quitline referral processes for health workers whose clientele are predominantly Indigenous Australians;
- Debunk common myths within Indigenous Australian communities about Quitline;
- Build the confidence of ATSI people to feel comfortable discussing smoking and quitting with a Quitline counsellor.

These activities take many forms. Facilitation of ongoing communication and engagement with Indigenous Australian staff may include Local Health District site visits, which provide an opportunity for community and Health Services staff to ask questions about the service. This knowledge exchange between Quitline staff and health workers across the state not only informs key stakeholders about services, it also facilitates better communication going forward. The visits are seen as crucial for developing trust in the community.

Quitline teams have also developed marketing resources to promote their services to health professionals; these resources are mailed out to various professionals in ACCHSs/AMSSs, including Aboriginal Health Workers and Health Managers, and Closing The Gap smoking cessation workers in Medicare Locals. Establishing good working relationships and referral pathways with Aboriginal Medical Services, community health and other groups (such as TIS&HL teams) is clearly key to the success of this programme.

Quitline is usually promoted in broader aspects of the TIS&HL campaign, such as adverts and social marketing campaigns. However, in addition, liaison teams take a more active approach to promoting Quitline in local communities, by attending community events to increase broad community awareness of the service. Marketing resources are also distributed at these community events.

Employing Quitline advisors from Indigenous Australian communities has also been a high priority for the service. However, in order to employ the right people, it has often been necessary to employ individuals without formal qualifications, making in house training crucial to success. Cultural competence training has also been provided for all Quitline staff members. Some teams have also used an Indigenous Australian Quitline Coordinator to undertake client and call reviews of more complex cases and vulnerable clients. Follow up calls are then passed to the Indigenous Australian team, with feedback and debriefing provided to the advisors who completed the initial counselling session, thus ensuring the provision of a culturally appropriate service.

Another limitation related to the gaps in data in certain areas as already identified. This may also be partly because respondents were not specifically asked to provide details in regard to certain criteria. Some relevant feedback was provided during interviews, though as not all

teams undertook an interview, this could not be included in the analysis. The relevant material is therefore summarized below:

Local Expectations

Interviewees identified a number of common expectations that they had for the programme on a local level. This included:

- Improvements in resource and service availability and affordability;
- Local people with local knowledge and connections having significant input and involvement in programme development and implementation;
- Ideally staff employed in the programme would be locally-connected, non-smokers (or quitters) who could role model healthy lifestyles;
- Environmental changes, such as the expansion of smoke-free areas, will occur in conjunction to programmes;
- Healthy food will be made more available and affordable;
- Improvements in knowledge about healthy lifestyles will occur;
- Programmes will be able to offer options to overcome language barriers;
- Programmes will continue long-term, and thus have the opportunity to build on initial successful engagement and other achievements.

National Leadership

When asked to comment on their expectations for National Leadership, interviewees suggested that National leaders should:

- Provide regular contact and strategic support;
- Be a source of ideas and guidance;
- Be supported by state-level coordinators.

The need for state-level coordinators, who can provide support between the strategic and operational levels, was very strongly conveyed by interviewees.

Local Leadership

Three common expectations for local leadership were expressed by those interviewed. This included that:

- Programme staff be local;
- Programme staff are non-smoking (or quitters) and living a healthy lifestyle;
- Role models and ambassadors have strong local connections and be a combination of young people and elders. High profile role models were also seen as important to either spark initial interest or if they could, to engage with local communities.

Access to communities

A number of common expectations about access to communities were identified during the telephone interviews. This included that:

- The high costs associated with travel and training for those in isolated and remote areas would be addressed;
- Equity in services (particularly for those in remote areas) would be able to be improved;

- Programme staff would be able to provide regular and ongoing access to remote communities, and time would be given to establish relationships and build up programs.

However these data gaps in information may also have resulted from a lack of guidelines regarding monitoring and evaluation; thus some information is simply not available because people have not been asked to collect it.

Implications for Project Monitoring and Evaluation

Although the Evaluation Team understands and embraces the argument that it is misguided to place overzealous reporting requirements on community-based organizations in Indigenous Australian communities, there must be some accountability in terms of the collection of performance data to assess whether progress is being made. Indeed, this need is echoed by those implementing the programmes, suggesting the desire for some evaluation framework within which to work. Furthermore, it is very difficult for independent evaluators to assess what works with fidelity when there are so many gaps in the evidence base and so few actual data collected. There is therefore a self-evident need for the design of a new Evaluation Plan to underpin the TIS&HL programme in the future.

There are several design issues that need to be considered here before elaborating on what this new Evaluation Plan could look like. Firstly, given cuts in programme funding and the need to expend as much of the disbursement as possible on high impact community-based interventions, a light touch approach to monitoring and evaluation should be undertaken focusing on critical performance indicators that provide demonstrable measurement of progress (or otherwise). Secondly, the Department of Health should make this process as easy as possible by working with RTIS&HL teams to ensure that:

1. A logical framework is completed for each activity to provide absolute clarity in terms of the intervention logic underpinning the activity goals, projected outcomes, outputs, activities and inputs. An example is provided in Box 4. This will ensure that monitoring data needs are identified from the outset.
2. Critical performance indicators are co-designed with core stakeholders. Box 5 provides some guidelines in this regard. For this type of programme it makes sense to focus on a small number of simple indicators that are knowable by all, precisely specified and capable of accurate measurement in quantitative or qualitative terms.
3. Data collection and reporting requirements are clearly expressed in the programme's Operational Manual.

The development of an Evaluation Plan is important for several reasons. If it is done well it will ensure absolute clarity in terms of programme goals, criteria for measuring progress, performance measures, forms of data collection and accountabilities. It is therefore a critical performance measurement tool for ensuring that programme activities remain outcome-focused. It should also provide insights into issues of strategic learning; programme communication and the diffusion of best practice. This work has begun within this evaluation process. The use of multi-criteria analysis has allowed us to work with key stakeholders on the identification of programme goals and criteria for measuring progress. Subsequent work would

benefit from a broader co-design approach to ensure common ownership of the process of monitoring and evaluation across the service system.

What would progress look like in this regard? Programme monitoring systems would be designed to allow the National Coordination team to measure and report against the programme's ability to improve outcomes for individuals, their families and communities, via a more integrated and sustainable service response. The monitoring system should allow identification of whether programme activities stay true to original design and intent – i.e. are programme goals achieved in practice, and are any adaptations reasonable and acceptable (e.g. resulting from communities). Critically, however, findings emerging from monitoring systems should be distilled into a *What Works Digest* and disseminated across the programme on bi-annual basis to ensure programme learning takes place.

Box 4. A Logical Framework

1. Narrative Summary	2. Verifiable Indicators	3. Means of Verification	4. Critical Assumptions e.g. Community acceptance
<i>Goal</i> – the overall aim to which the activity is expected to contribute (in this case the TIS&HL programme).	The measures – <i>direct or indirect</i> – that show contribution towards achieving the goal. These can include quantitative ways of measuring, or qualitative ways of evaluating whether these broad objectives are being achieved over time.	The sources of information, data and methods used to show achievement of the goal.	Identification of factors beyond the project's control that need to be understood to maintain progress towards achieving the goal.
<i>Outcomes</i> (or objectives) – the changes that the activity is hoping to achieve.	The measures – direct or indirect – that show the degree of progress that is being made towards achieving programme objectives.	The sources of information, data and methods used to show progress towards the achievement of objectives.	Identification of factors beyond the project's control that need to be understood to maintain progress towards achieving outcomes.
<i>Outputs</i> – the outputs that are to be produced by the activity in order to achieve its purpose (e.g. Qitline).	The measures – direct or indirect – that show if programme outputs are being delivered.	The sources of information, data and methods used to show delivery of outputs.	Identification of factors beyond the project's control that need to be understood to maintain progress towards designing appropriate outputs.
<i>Activities</i> – the activities that must be undertaken in order to produce the outputs.	The measures – direct or indirect – that show if Blueprint outputs are being delivered.	The sources of information and methods used to show that activities have been completed.	Identification of factors beyond the project's control that need to be understood to maintain progress towards delivering high quality activities.
<i>Inputs</i>	Resources – type and level of resources required for the Blueprint Finance – overall budget Time – planned start and end date		

Box 5. Constructing effective performance indicators

The following criteria serve as guidelines for the construction of effective performance indicators:

1. Indicators should measure change in specifically those social and economic conditions that the programme is attempting to improve.
2. The measurement of progress in any endeavour must relate closely to the aims agreed upon.
3. It follows from items 1 and 2 that the process of selecting indicators should be a participatory one in which all programme stakeholders and a representative sample of beneficiaries should be involved.
4. All indicators selected must be simple, knowable by all (i.e. by all stakeholders) and easy to monitor.
5. They should be precisely specified and capable of accurate measurement in quantitative or qualitative terms.
6. Data relating to them must be available, or capable of being produced.
7. Movement up and down in the value of any indicator should have an unambiguous positive or negative meaning in relation to programme intentions.
8. The movement should, so far as possible, reflect changes brought about by the activities initiated under the programme rather than changes stemming from other policy interventions or from non-policy related factors.
9. The information produced on some indicators may have a 'downside risk' in the sense that it may feed negative perceptions and prejudices and must therefore be carefully managed.
10. Given the range of objectives that the programme is attempting to achieve, in the selection process there should be a clear understanding of the difference between 'structure', 'process' and 'outcome' indicators and of the usefulness of certain proxy indicators in some circumstances.

It is important to keep S, P and O indicators separate because it may well be that despite the 'structure' (S), the 'process' (P) may not implement the rules very well, nor may the 'outcome' (O) reflect their apparent intention. As Peter Ambrose puts it:

The three types of indicator can be understood by analogy with making a pudding. The **S** is the recipe, the **P** is the making of the pudding and the **O** is the eating. Proverbially, the proof of the matter lies in the **O**, not in the other two.

In summary then, an effective Evaluation Plan would normally be organised around the following considerations:

Systems design and rationale: Programme context; systems rationale; the purpose of the evaluation; evaluation approach; design principles; systems logic, accountabilities framework and performance measures; research questions; research methods.

Process evaluation framework: rationale; observation sites; sampling and recruitment of participants; performance measures; research questions; qualitative research methods.

Outcome evaluation framework: rationale; goals; performance measures; research questions; identification of data sets; quantitative research methods including programme costing methodology.

Strategic learning evaluation framework: rationale; mapping of the communication ecology; methods of systems learning; communication and story-telling; performance measures; research questions; identification of data sets; qualitative research methods.

Evaluation management: team roles and responsibilities; reporting activities and timeframes; communication protocols with RTIS&HL and the National Coordination team.

While some lessons could be drawn from the Urbis, *Indigenous Chronic Disease Package Monitoring and Evaluation Framework* in terms of its' outcome evaluation framework; the evidence that we have compiled in this report strongly suggests that any Evaluation Plan for the TIS&HL programme should be developed using a co-design principle with Indigenous Australian communities. Community-driven development remains the key way forward for achieving progressive health outcomes in Indigenous Australian communities.

Conclusions and Recommendations

The outcomes of this MCDA support the findings of the rapid review and consultation described in Reports 1 and 2 respectively. The 'best' performing 'Options', or combinations of activities have been identified based on the available evidence. It is therefore recommended that the TIS&HL programme:

- Integrates a reporting and evaluating framework into future iterations of the programme as described above to reduce data gaps in future monitoring and review of the effectiveness of activities;
- Retains the flexibility of its funding approach, but provides advice to programme teams regarding the types of activities that are effective. For example, a set of good practice case studies could be produced based on the material collected during the Programme review, using the top three Options from each of the broad MCDA criteria as a starting point, or choosing the top scorers within each sub-criterion depending on what factors the Department wishes to prioritise;
- Continues to develop a multi-faceted intervention approach that includes elements such as social marketing, community education, quit support groups, nutrition and physical activity programmes and school based interventions;
- Involves local communities in design, delivery and planning of programmes, thereby building on the success of recent interventions;
- Builds on the good work initiated by the programme in reducing Indigenous Australian smokers' perceived social acceptability of smoking, and increasing negative personal attitudes to smoking through social marketing and community education;
- Further develops the association between recall of culturally appropriate and personally relevant anti-tobacco advertising and wanting to quit among Indigenous Australian smokers;

- Facilitates the ongoing development of partnerships between clinical and non-clinical services to ensure a seamless service for individuals wishing to quit smoking;
- Increases Indigenous Australian smokers' access to and use of stop-smoking medicines such as NRT and culturally appropriate support for cessation.
Consideration should be given to ways of extending this access, for example by allowing TIS&HL teams to dispense NRT;
- Continues to build local capacity and develop the local workforce, local role models and ambassadors;
- Supports further development of culturally specific Quitline approaches;
- Uses the enhanced monitoring and evaluation framework described above to develop the evidence base which underpins tobacco control and healthy lifestyle promotion with the Indigenous Australian population.

Appendix 1: Assessment Criteria

Criterion	Rank	Group weighting (%)	Sub-criterion weighting (%)
Effectiveness	1	30	
Improved attitudes to smoking			30
Improved attitudes to nutrition			25
Improved attitudes to physical activity			25
Behaviour change smoking - prevent uptake			30
Behaviour change smoking - cessation			30
Behaviour change nutrition			20
Behaviour change physical activity			20
Community Ownership & Engagement	2	25	
Consultation			25
Local involvement in programme design			25
Acceptance of National Leadership			25
Acceptance of local workforce			25
Acceptance of local role models/ambassadors			20
Programme attendees			25
Flyers/brochures distributed			15
Local leadership			25
Implementation	3	25	
Clear purpose & design			25
Effective coordination including initial collaboration			25
Clear rules & roles for workforce			25
Adequate allocation of resources			25
Equity			25
Access to Communities			25
Programme monitoring/routine data collection			20
Budgeting			20
Meeting deadlines			20
Effective support docs & staff training			25
Recruitment of workforce with skills			25
Length of funding period			25
Total budget provided			20
Expectations of the programme	4	10	
Increase community capacity for change			10
Increase workforce capacity			10
Effect behavioural change			10
Local expectations of the programme			10
Systems Learning & Adaptation	5	10	
Development of partnerships (including with host organisation)			10
Repetition of activities			5
Programme transfer			5
Onward referral			10
Brokering			5

Appendix 2: Glossary of Terms

Community ownership and engagement refers to the degree to which programme activities are viewed as legitimate in the eyes of the community and are co-created by members of the community. This measure assumes that people are their own assets, and the role of government is to catalyse, facilitate or support the community in realising its aspirations. Community ownership and engagement means more than the involvement or participation of communities. It implies that the community itself is the key agent of social change.

Critical assumptions are environmental factors beyond the programme's control that are necessary for maintaining progress towards the goal.

Effectiveness refers to the degree to which programme activities achieve programme outcomes.

Expectations are the views of different programme stakeholders as to what can reasonably be expected from the programme activity given prevailing environmental constraints.

Goal refers to the overall aim to which the programme is expected to contribute (normally linked to an overarching policy e.g. 'Closing the Gap').

Implementation is the resources (social, economic, institutional and political) required to deliver programme outcomes.

Means of verification refers to the sources of information and methods used to show achievement of the goal.

Programme activities are the interventions that must be undertaken in order to produce the outputs that need to be generated by the programme in order to achieve its purpose.

Programme inputs refers to type and level of resources required for the programme, the overall budget and time (planned start and end date).

Programme outcomes are the changes that the programme is hoping to achieve.

Programme outputs refer to the results in the control of programme management i.e. the outputs that are to be produced by the programme in order to achieve its purpose.

Systems learning and adaptation refers to the ability of programme activities to facilitate opportunities for other forms of problem solving elsewhere in the governance system through programme transfer, resource sharing or other forms of lesson drawing. This criteria provides us with a measure of the value-added of a particular programme activity.

Verifiable indicators are the measures – direct or indirect – that show the programme's contribution towards achieving the goal. These can include quantitative ways of measuring, or qualitative ways of evaluating whether these broad objectives are being achieved over time.