Recommendations to guide the delivery of Lifestyle Modification Programs in Cape York 2017

‘Women’s Walking Group, Lockhart River’
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Recommendations to guide the delivery of Lifestyle Modification Programs in Cape York, 2017

Executive Summary

The dramatic worldwide increase in obesity has been called a global epidemic by the World Health Organization. While obesity occurs in all population groups in Australia, Aboriginal and Torres Strait Islander people and people from low socio-economic backgrounds have the highest prevalence. Current data shows that 70% of Aboriginal and Torres Strait Islander adults in Queensland are overweight or obese. Being overweight or obese reduces life expectancy and greatly increases the risk of high blood pressure, muscle, bone and respiratory disorders, and chronic conditions such as type 2 diabetes, heart disease and stroke.

Multi-strategic interventions combining dietary, physical activity and behaviour change strategies have been found to be effective in reducing weight gain and chronic disease risk. At Apunipima, a comprehensive approach has been adopted to influence the proportion of Aboriginal and Torres Strait Islander adults in Cape York at an unhealthy weight. A key strategy of this approach has been to deliver community-based Lifestyle Modification Programs (LMPs). Such programs aim to positively influence behaviours in order to reduce chronic disease risk and improve health outcomes.

Between 2012 and 2015, Apunipima delivered two LMPs (Living Strong and Beat It) in a number of Cape York communities, with varying success. From an evaluation of the delivery of Beat It in 2013, it was recommended to review how the program was planned, designed, implemented and evaluated. A Lifestyle Modification Program Review Reference Group was established to:

- review the delivery of Beat It and Living Strong in Cape York and discuss what worked well and what could be improved
- review current national LMPs, what they offer and evidence of effectiveness
- review identified barriers and enablers to participating in and completing a LMP
- review components of LMPs that could be included and/or modified to support improved program outcomes for people in Cape York
- review monitoring and evaluation components of Beat It, Living Strong and other LMPs to identify suitable program measures
- develop recommendations to inform the ongoing delivery LMPs in Cape York

This report provides recommendations from the review for the purpose of guiding the future delivery of LMPs in Cape York.

This document is unique in that the recommendations have been developed with a specific focus on the needs of Cape York communities, while being informed by best available evidence. The purpose of documenting these recommendations is to ensure that LMPs delivered in Cape York achieve the best possible health outcomes for participants and their families.
**Recommendations**

- Conduct extensive community consultation and ensure local participation during all stages of planning, implementation, and evaluation\(^1\)\(^3\)
- Deliver programs in partnership with other community organisations to increase capacity, engagement, and support\(^1\)
- Programs must be flexible and adaptable to cater for local community needs, a variety of target groups, and to accommodate facilitators with different qualifications and skill sets
- Educational content must be consistent with the Chronic Conditions Manual\(^8\)
- Programs must be delivered using a variety of culturally appropriate resources and delivery methods (e.g. multimedia, props, hands on activities) to make sessions engaging and interactive
- Tailor physical activity sessions to the needs and interests of the participants, the resources available in community, and the skills of facilitators
- Use nationally recognised screening tools to determine participant risk of an adverse event during physical activity/ exercise
- Pre and post program documentation must be concise in order to minimise the burden on facilitators and participants
- Understand local barriers and enablers to participation in a LMP
- Consider recruiting participants from existing community groups as a strategy to improve attendance
- Promote the program using products and distribution methods appropriate for the community
- Understand local barriers and enablers to ongoing participation in a LMP
- Participant progress and successes must be celebrated throughout the program
- Physical activity sessions must aim to build participant confidence to engage in physical exercise outside of the program
- LMPs must be delivered as part of a multi-strategic approach to improving health outcomes\(^4\), including strategies that address individual and family behaviour change and environments that promote good health
- Conduct program evaluation with minimal burden on participants
- Program outcomes must be shared with community

\[\text{[The recommendations above are listed as they appear in the report. The evidence and learnings that inform each recommendation are provided through the report.]}\]
1. Introduction

Lifestyle Modification Programs (LMPs) vary in design and delivery but the overall aim is to influence a positive behaviour change in participants to reduce chronic disease risk and improve health outcomes.¹ ² LMPs are generally group-based programs that include physical activity sessions, education on nutrition and other relevant topics, and strategies to influence the social determinants of health.²

Evidence shows that LMPs have been effective in assisting participants to achieve positive changes in diet, physical activity levels and weight.⁹ Although these interventions have been shown to have a positive effect, the delivery of an LMP is often complex, labour intensive, and costly.¹¹

Lifestyle Modification Programs at Apunipima

At Apunipima, LMPs (Living Strong and Beat It) have been delivered as part of our core primary health care service.

Living Strong is a group based healthy lifestyle program, most recently delivered in 2014 in the Cape York community of Wujal Wujal. Components of the program continue to be delivered as individual education sessions with various target groups in a number of Cape York communities.

Between 2013 and 2015, Beat It was delivered in the Cape York communities of Hope Vale, Wujal Wujal and Laura. While gaps exist in evaluation data, some positive improvements were shown. As a result of the programs, participants increased their physical activity level, made healthier food choices and improved their self-image. Further, collaborative partnerships were enhanced, and participants responded positively to the programs.

Participant quotes include:

“*I have waited so long for this*, “*I am just enjoying this*, ”*we are the first [to participate in this program], and so we must finish this and show the rest anyone can do this!*"

“I Feel Good. I have more energy, than I had before”

“I am having more fruit… I have the whole family eating healthier”

From an evaluation of the delivery of Beat It in Cape York in 2013, it was recommended to review the key attributes of LMPs to determine what works well and what could be improved for the future delivery of programs for Aboriginal and Torre Strait Islander people in Cape York.
2. **Purpose and Methodology**

**Purpose**

The purpose of this report is to provide a set of recommendations to guide the future delivery of Lifestyle Modification Programs (LMPs) in Cape York. The purpose of documenting these recommendations is to ensure that LMPs delivered in Cape York achieve the best possible health outcomes for participants and their families.

**Methodology**

A Lifestyle Modification Program Review Reference Group (Reference Group) was formed in October 2015, comprising representatives from the Apunipima Health Promotion and Nutrition Teams, the Apunipima Healthy Lifestyle Program Manager, the PCYC Indigenous Business Unit Regional Manager and a resident PhD scholar researching capacity building for health promotion. Members were selected based on their ability to address the purpose of the review.

The Reference Group met six times between November 2015 and January 2016. To conduct the review, members referred to the current evidence base and their experience from participating in the delivery of LMPs while working with Apunipima and in previous roles.

The Reference Group was tasked with:

- Reviewing the delivery of Beat It and Living Strong in Cape York and discuss what worked well/what could be improved
- Reviewing current national LMPs, what they offer, and evidence of effectiveness
- Reviewing identified barriers and enablers to participating in/completing a LMP
- Reviewing components of LMPs that could be included and/or modified to support improved program outcomes for people in Cape York
- Reviewing monitoring and evaluation components of Beat It and Living Strong and other LMPs to identify suitable measures
- Developing recommendations to inform the ongoing delivery LMPs in Cape York

Discussions and actions from the Reference Group were minuted and inform this report.

**Report structure**

In this report, Reference Group learnings and recommendations are presented under the following six headings:

- Planning the delivery of a LMP
- Program components required to facilitate behaviour change and improve health outcomes
- Participant recruitment
- Supporting participants to retain consistent participation and complete the program
- Supporting participants to maintain healthy lifestyle choices adopted during their participation in the program
- Appropriate program measures for evaluation
3. **Learnings and Recommendations**

3.1 **Planning the delivery of an LMP**

For Aboriginal and Torres Strait Islander people, meaningful community consultation, engagement and involvement is critical for program effectiveness.\(^1\)\(^,\)\(^2\) NACCHO recommends that Aboriginal and Torres Strait Islander health promotion initiatives involve community input at all levels of program planning, implementation, and evaluation.\(^3\)

**Learnings**

When planning the delivery of a LMP in Cape York it is essential to identify and engage with all appropriate stakeholders, including community members and groups, local agencies, and health service staff.

Initial consultation with communities should include an assessment of community readiness, establishing an understanding of community views on barriers and enablers to participation, and discussions on the design and delivery of the program. Conducting a community assessment will also help to determine community interest, identify past and existing programs, workforce capacity, and available facilities.

Engagement with community should also involve working together to establish realistic program objectives, review session content and program structure, identify potential participants and program facilitators, and determine an appropriate time for delivery. It will also be useful to develop a program plan to ensure all stakeholders share the same basic understanding of the program components and steps required for delivery.\(^12\)

**Recommendations**

— Conduct extensive community consultation and ensure local participation during all stages of planning, implementation, and evaluation\(^1\)\(^-\)\(^3\)
4. **Program components required to facilitate behaviour change and improve health outcomes**

4.1 **Program structure**

A review of LMPs in Australia highlighted that programs vary significantly in structure, content, participant screening, and documentation. Intensity and duration of programs vary greatly. Most programs include physical activity sessions, as well as education on nutrition and other relevant topics.

Programs need to be structured and evidence based, but also flexible and adaptable to suit the specific needs and opportunities of communities. While there needs to be core components of the program, methods of delivery and program structure should be flexible and suitable for local community needs.

Shorter duration programs have been shown to have lower dropout rates. However, evidence indicates that longer duration programs have a greater influence on behaviour change. Trends across past and existing programs show an average program duration of approximately 12 weeks.

Group size must be appropriate to ensure safety and enjoyment of participants. Many programs reviewed had approximately 10-15 participants, with very few having over 30. Sessions should be culturally appropriate and delivered in a setting familiar to the participants.

**Learnings**

Observational evidence in North and Far North Queensland showed that facilitators delivering the Living Strong program tended to run shorter programs in order to reduce dropout rates. Organisational experience delivering the Beat It program showed that staff availability and staff burnout become important factors during longer duration programs. Longer programs may be successfully implemented if a number of trained facilitators support each other, work together as a team and have strong organisational support.

Partnerships should be developed with relevant organisations to assist with program delivery. This will increase local ownership, share costs, facilities, resources, and personnel (consider Queensland Health, PCYC, council, and others).

**Recommendations**

- Deliver programs in partnership with other community organisations to increase capacity, engagement, and support
- Programs must be flexible and adaptable to cater for local community needs, a variety of target groups, and to accommodate facilitators with different qualifications and skill sets
4.2 Program Structure

The Chronic Conditional Manual includes up-to-date, evidence based guidelines for the prevention, early intervention and management of chronic conditions. Content of education sessions should be consistent with relevant sections of this manual. This will ensure consistency and accuracy of information being presented to participants.

Learnings

Education content

Education content of LMPs varies. The reference group suggest the following mandatory and optional components. Optional components may be included as determined by the interests and needs of the participants.

Education content – mandatory

- Australian dietary guidelines 2013
- National physical activity guidelines
- Link between nutrition, physical activity and chronic disease risk
- Goal setting, barriers and enablers
- Explanation of health services available in community, which may include meet and greet with Primary Health Care staff

Education content – optional

- Smoking
- Diabetes
- Kidney health
- Drug and alcohol
- Chronic disease management
- Medications
- Emotional eating

Education delivery

Education content should appropriate and relevant to the cultural context in which it is delivered. Education sessions should allow for open discussion and not be too formal (consider guided conversation/ yarning/ group discussion, with less reliance on lecture style PowerPoint presentations. Photos can help guide discussions). Education sessions can be quite short in duration (as short as 15 minutes, or as appropriate for the group), and should be delivered either immediately before or after physical activity sessions.

Resources from past/ existing programs can be used at the discretion of the facilitator. These resources may need to be adapted to suit literacy levels, knowledge levels, and context of remote Cape York communities.

Organisational experience and cultural guidance has highlighted the potential benefits of utilising the first education session for introductions between the facilitators and participants. This will help to build rapport between the facilitator and participants and establish an appropriate context for the delivery of the program.
Organisational experience and participant feedback has shown the importance of delivering program sessions that are engaging, challenging and fun.\textsuperscript{1} Flipcharts, handouts, cookbooks and recipes may be useful. Take-home educational resources related to program sessions may be beneficial for participants. When choosing resources for participants, literacy levels and cultural appropriateness must be considered.

In programs previously delivered by Apunipima, participants have enjoyed learning new types of exercises, learning new recipes and tasting new foods. Participants engaged well with skills-based nutrition activities, such as cooking sessions, label reading and food budgeting. Cooking sessions provide an opportunity for participants to learn healthy recipes, basic cooking skills, and to increase their confidence to prepare healthy meals at home using ingredients that are available locally.

Consider engaging health professionals to deliver education components specific to their skill set (e.g. nutritionists, diabetes educators, social workers etc.). Messages delivered by community-accepted external expertise may be more effective than messages delivered by local staff.\textsuperscript{2} When supporting participants to set realistic behaviour change goals, consider the involvement of a social worker to support participants through any issues that may arise.

The Reference Group accessed, summarised and reviewed a number of electronic resources targeted at health behaviour change. These included mobile phone apps, videos and websites. Through discussions, the Reference Group agreed that these resources were not appropriate for use in Cape York. Limitations included culturally appropriateness, requirement of reliable internet connectivity, and lack of compatibility across various mobile phone platforms. Local consultation may help to identify appropriate resources for a particular community.

**Recommendations**

- Educational content must be consistent with the Chronic Conditions Manual\textsuperscript{8}
- Programs must be delivered using a variety of culturally appropriate resources and delivery methods (e.g. multimedia, props, hands on activities) to make sessions engaging and interactive
4.3 Exercise sessions

Facilitators and organisations delivering exercise sessions must be covered by appropriate insurance. Facilitators should be appropriately skilled, know the community and respect the participants. Fitness Australia recommend that physical activity sessions are delivered by Registered Exercise Professionals. Apunipima’s Professional Indemnity Insurance Policy includes delivering group exercise classes and leading sporting activities under the scope of practice.

The Adult Pre-Exercise Screening System does not measure risk for participating in high intensity exercise. Intensity should therefore be limited to low-moderate intensity unless instructed by a medical professional.

Learnings

Research and organisational experience has shown that participants may enjoy a range of different physical activity options. It is important to choose activities that participants are interested in, the community has the resources to support, and the facilitator has the skills to deliver. Consider gym work, circuit classes, resistance training, aerobic training, yoga, dance, boxing, swimming, walking, running, sport, games, or other as appropriate for the community.

Organisational experience has shown that having more than one facilitator delivering a program ensures the regular delivery of program sessions. Relying on fly-in fly-out facilitators creates a risk to program delivery. Therefore, program sessions should be delivered by community based staff where available (Apunipima, PCYC or other organisations).

Recommendations

- Tailor physical activity sessions to the needs and interests of the participants, the resources available in community, and the skills of facilitators.
4.4 Screening, registration, and participant documentation

Nationally recognised screening tools should be utilised where appropriate. For participants 18 years and over, the Adult Pre-Exercise Screening System should be used to determine participant’s level of risk of an adverse event during physical activity/ exercise (see appendix 1).²¹

Learnings

Participants will require a doctor’s clearance prior to commencing a program. A template or guideline may need to be developed to guide this process. The process should include:

- complete Adult Pre-Exercise Screening System²¹
- complete/ review recent 715 health check during participant assessment
- measure and record participants height and weight to ensure data is up to date
- doctor to recommend exercise intensity for each patient
- doctor to identify warning signs for each patient

Exclusions from joining the program may include:

- particular medical conditions as identified by Adult Pre-Exercise Screening System or by a doctor
- aged under 18, if program tailored for adults
- pregnant women

Prior to commencing a program, participants will be required to complete documentation including consent forms, pre-exercise screening, medical clearance, and pre-program evaluation. Organisational experience shows that program documentation should be concise in order to minimise the burden on facilitators and participants. Consent forms can be designed with tick boxes for all program components (participation, data sharing, photos) in order to minimise paperwork.

Recommendations

— Use nationally recognised screening tools to determine participant risk of an adverse event during physical activity/ exercise
— Pre and post program documentation must be concise in order to minimise the burden on facilitators and participants
5. **Participant Recruitment**

In order to improve participation in LMPs delivered in Cape York it is critical to have a sound understanding of local community views on barriers and enablers to participation. Common barriers identified through the Beat It evaluation and supported by the literature include participants being too busy (work and family commitments), being self-conscious, the stigma of being overweight, fear of not being able to do the activity, a feeling that being “busy” equates to being active, and women not wanting to build muscle and appear too masculine.

Common enablers for participation include a personal desire to improve health, a desire to be a good role model for children, programs that encourage people to join with a friend, appropriate goal setting, self-perception, and confidence (influenced by positive reinforcement and social supports).

**Learnings**

Experience from the Reference Group and recent research highlights that recruiting participants from established groups has the potential to increase participation and the likelihood of behaviour change (for example, MyPathway, HACC, men’s and women’s groups). This may also help to alleviate the problem of poor group cohesion, which can occur if participants are recruited from various groups in community. An alternative is to encourage participants to join with a friend or family member. The group format may assist in the maintenance of behaviour change following the completion of the program.

Promotion of the program in community should commence four weeks prior to the first program session. Promotion may be targeted at high risk individuals/ families/ groups, or the whole community. Systems should be established to ensure clinical staff can refer clients to the program.

Various media, as deemed appropriate for the community, could be used to promote the program. The use of testimonials (photos, video, audio or written) from past participants may be useful. Information stalls, radio, and AUSDRISK tool should be considered if additional promotion is required.

Explore the possibility of providing incentives for participation. These can be quite small and influenced by what is available (incentives could include; water bottles, gym towels, pedometers, weekly recipes, hats, meals, cooking equipment, healthy food vouchers, mobile phone credit, graduation certificate, graduation celebration). Incentives can be provided at various stages to encourage joining, attendance or completion.

**Recommendations**

- Understand local barriers and enablers to participation in a LMP
- Consider recruiting participants from existing community groups as a strategy to improve attendance
- Promote the program using products and distribution methods appropriate for the community
6. Supporting Participants to retain consistent participation and complete the program

Barriers for ongoing participation can include high costs to participate, lack of childcare when required, competing work and family obligations, illness or not feeling well enough, not seeing improvements, lack of transport, and adverse weather such as rain or being too hot.

Enablers for ongoing participation include fostering friendly and supportive relationships with other participants, an interesting and engaging program, suitable venue, convenient timing and location, noticeable changes and improvements (e.g. ability to do something they couldn’t do previously, improved health markers, increased confidence and skills), cues/ reminders (e.g. phone, text message, social media), realistic goal setting, and environmental supports.

To support participants through a program facilitators should be aware of behaviour change models and the social context in which change occurs. This will help to ensure program activities and advice are appropriately targeted.

Learnings

Much effort can be directed at recruiting people to join a LMP. However, just as much effort is required to support people to stay motivated throughout a program.

Experience from the Reference Group highlighted the value of building relationships between participants and facilitators to allow for open communication to ensure questions and concerns are addressed when they arise. Family support (including the extended family) is highly valued in Aboriginal and Torres Strait Islander cultures and it can be very valuable to allow the whole family to attend sessions where possible.

High costs of programs has been identified as a barrier for participation, therefore there should be zero or minimal cost for attendance.

It is important to celebrate successes and recognise participant progress that is broader than weight loss (e.g. attendance, new skills, new abilities, enjoyment, flexibility, strength, aerobic capacity). Certificates of completion should be provided for all participants.

Recommendations

— Understand local barriers and enablers to ongoing participation in a LMP
— Participants progress and successes must be celebrated throughout the program
7. Supporting participants to maintain healthy lifestyle choices adopted during their participation in the program

A common theme in the literature is a lack of support for participants to maintain healthy changes following the completion of a LMP. Apunipima staff have observed that participants have found it difficult to maintain changes if lifestyle norms within their family did not support new behaviours and/or if participants did not enjoy the physical activity or dietary changes. Participant skills, confidence, time management, and family support influenced maintenance of changes.

National physical activity guidelines recommend being active on most, preferably all, days. Therefore, programs must aim to build confidence and skills so participants feel motivated to exercise following the completion of the program and continue healthy eating behaviours. Ideally, programs will have a positive flow-on effect on families and communities.

Learnings

Research indicates that when individuals make changes to their behaviours in response to a health promotion program, these changes are unlikely to be maintained if they are not reinforced by changes in the social and physical environments.

Experience from the Reference Group shows that maintenance of behaviour change is enhanced by building confidence and skills of participants, and increasing opportunities for participants to engage in physical activity and make healthy food choices during and after the program. This may include advocating in the community for sporting facilities, foot paths, street lighting, healthier food supply, or social supports such as walking groups, dance groups, and sporting teams. Healthy lifestyle messages, consistent with those in the program, should be promoted in the community (e.g. at the clinic, store, local media).

Ongoing communication via phone and text messages has proven useful. This can be used to provide reminders, support, and motivation for current and past participants. Relevant health professionals may have the capacity to provide ongoing support to program participants.

Recommendations

- Physical activity sessions must aim to build participant confidence to engage in physical exercise outside of the program
- LMPs must be delivered as part of a multi-strategic approach to improving health outcomes, including strategies that address individual and family behaviour change and environments that promote good health
8. Appropriate program measures for evaluation

Aboriginal and Torres Strait Islander communities are a population group that have been exposed to extensive data collection and research, often without appropriate consultation and approval from relevant cultural authorities. Unsurprisingly, some research has shown a community disinterest in providing feedback. As such, it is imperative to explain the purpose of the program evaluation, the potential benefits for community, and to provide community feedback from the evaluation.

Learnings

Structured evaluation of programs is essential to monitor impact. Consistent evaluation measures will allow for the comparison of programs delivered in different communities.

Many existing LMPs require extensive pre and post data collection. Attempting to gain such data can be burdensome on both facilitator and participants. Complex questioning can be confusing for participants and can lead to unreliable data. Organisational experience with the Beat It program showed that facilitators did not complete evaluation questions in their entirety and, in some instances, gaps in collected data made effective evaluation impossible.

Evaluation should be concise, relevant, and appropriate in order to minimise the burden on facilitators and participants. Effective evaluation tools are required in order to obtain useful evaluation data. As a community controlled health organisation, it is important that Apunipima provides feedback to the community about activities, programs delivered, and outcomes achieved.

Evaluation considerations:

- The aim of evaluation is to demonstrate if the goals and objectives of the program have been achieved
- Evaluation should begin in the planning phase of program delivery
- Evaluation should be multifaceted and include both process and impact evaluation
- Objectives over a 12 week program should be realistic to what changes are likely to be expected
- Data must be obtained in an appropriate and acceptable way in order to minimise burden for participants and facilitator. Only data that will be used in the evaluation should be obtained
- Ensure confidentiality of participants’ data
- As a cultural safety measure, ensure that an Aboriginal and Torres Strait Islander staff member is part of the team engaging with community members when collecting data
- Evaluation outcomes should feed into a continual quality improvement process, and practice should adapt in response to new evidence as it becomes available.

Types of objectives for a LMP based on the components of the program outlined previously:

- Increased knowledge and awareness specific to the content of the education sessions
- Increase in reported frequency of physical activity and healthy eating behaviours
- Increase in self-reported attitude and confidence to adopt a healthy lifestyle
Essential measures:

- Weight (pre and post)
- Height
- Attendance record for each session
- Post program qualitative feedback
- Knowledge, attitudes and confidence: it may be more appropriate and convenient to assess only at the end of the program. Guided questioning could be used to obtain self-reported change in knowledge.

Optional measures (discussed in appendix 2)

- Blood pressure (pre and post)
- Waist circumference (pre and post)
- Daily steps as measured by a pedometer
- Lifestyle behaviours: physical activity frequency, smoking status, alcohol consumption, fruit and vegetable intake
- Fitness related pre-testing related to the physical activity component of the LMP (e.g. flexibility, balance, strength, aerobic capacity)
- Short Form 12 to measure functional health and well-being form the patients point of view

To enhance the strength of the evaluation, it is recommended to consider follow-up assessment 3-6 months post program. However, the additional burden on facilitators and participants needs to be considered. Consider linking pre/ post testing with 715 health check criteria. This will allow data to feed into future 715s, or data to be pulled from recent 715s.

A continual quality improvement process should be implemented with evaluations to guide future program delivery.

**Recommendations**

- Conduct program evaluation with minimal burden on participants
- Program outcomes must be shared with community
9. **Closing remarks**

The overall aim of LMPs is to influence positive behaviour changes in participants in order to reduce chronic disease risk and improve health outcomes.\(^1\,^2\) The recommendations in this report have been developed to ensure the delivery of LMPs in Aboriginal and Torres Strait Islander communities in Cape York will result in the best possible outcomes for participants and their families.

This report provides recommendations on the design, planning, implementation and evaluation of LMPs. It highlights the importance of community consultation, flexibility in program design and delivery, the need for a multi-strategic approach to improving health outcomes, the importance of stakeholders working together, and the importance of a concise and effective evaluation process.

Lifestyle factors, obesity, and chronic disease are global issues. There is no current gold standard to address these issues. This is a developing field and research and ideas are abundant. Health promotion strategies will be essential to influence positive change.
10. Acknowledgements

The completion of this report would not have been possible without the guidance and input from the Reference Group. The Group members were:

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Apunipima would also like to acknowledge the Cape York community members who participated in and continue to support the delivery of Lifestyle Modification Programs in their communities.
11. References

1. Humby M, Stjernqvist L. Determining the need and value of nutrition and physical activity based lifestyle modification programs for Aboriginal and Torres Strait Islander communities. 2014.


Appendix 1

Adult Pre-Exercise Screening System

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ADULT PRE-EXERCISE SCREENING TOOL

The screening tool does not claim to be a definitive test for any medical condition. The information provided is based on the best knowledge and experience of the developers. The tool is intended to identify individuals who may need further evaluation and referral to a healthcare professional. Use of the tool is at the discretion of the user.

STAGE 1 (COMPULSORY)

1. Have your doctor ever told you that your heart condition or physical activity may harm you? Yes No
2. Do you have a history of diabetes or impaired glucose tolerance? Yes No
3. Have you had a heart condition that may have caused chest pain or discomfort? Yes No
4. Do you have any limitation in daily activities due to joint pain or arthritis? Yes No
5. Do you have a previous history of heart disease or stroke? Yes No

IF YOU ANSWERED Yes to any of the 5 questions, seek medical advice before starting a physical activity program.

STAGE 2 (OPTIONAL)

1. Age: Over 65 years?
   - Yes
   - No
2. Fitness history (please tick one box below):
   - No
   - Limited
   - Moderate
   - Excellent
3. Describe your current physical activity level:
   - Sedentary
   - Light
   - Moderate
   - Vigorous
4. Describe your current level of disability (please tick one box below):
   - None
   - Limited
   - Severe

IF YOU ANSWERED Yes to any of the 5 questions, seek medical advice before starting a physical activity program.

STAGE 3 (OPTIONAL)

1. BMI (kg/m²):
   - Underweight
   - Normal
   - Overweight
   - Obese
2. Resting BP (mmHg):
   - Low
   - Normal
   - High
3. Resting HR (bpm):
   - Low
   - Normal
   - High
4. Resting blood pressure:
   - Low
   - Normal
   - High
5. Risk factors:
   - Yes
   - No

IF YOU ANSWERED Yes to any of the 5 questions, seek medical advice before starting a physical activity program.

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EXERCISE INTENSITY GUIDELINES

- **Sedentary**: < 40% VO2max
- **Light**: 40 to < 55% VO2max
- **Moderate**: 55 to < 70% VO2max
- **Vigorous**: ≥ 70% VO2max

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EXERCISE INTENSITY GUIDELINES

- **Sedentary**: < 40% VO2max
  - Very, very light
  - RPE < 1
- **Light**: 40 to < 55% VO2max
  - Very light
  - RPE 1-2
- **Moderate**: 55 to < 70% VO2max
  - Moderate
  - RPE 3-4
- **Vigorous**: ≥ 70% VO2max
  - Hard
  - RPE ≥ 7

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ADULT PRE-EXERCISE SCREENING TOOL

STAGE 2 (OPTIONAL)

1. Age: Over 65 years?
   - Yes
   - No
2. Fitness history (please tick one box below):
   - No
   - Limited
   - Moderate
   - Excellent
3. Describe your current physical activity level:
   - Sedentary
   - Light
   - Moderate
   - Vigorous
4. Describe your current level of disability (please tick one box below):
   - None
   - Limited
   - Severe

IF YOU ANSWERED Yes to any of the 5 questions, seek medical advice before starting a physical activity program.

STAGE 3 (OPTIONAL)

1. BMI (kg/m²):
   - Underweight
   - Normal
   - Overweight
   - Obese
2. Resting BP (mmHg):
   - Low
   - Normal
   - High
3. Resting HR (bpm):
   - Low
   - Normal
   - High
4. Resting blood pressure:
   - Low
   - Normal
   - High
5. Risk factors:
   - Yes
   - No

IF YOU ANSWERED Yes to any of the 5 questions, seek medical advice before starting a physical activity program.
Appendix 2

Program measures (optional)

— Blood pressure (pre and post)
  ▪ Pros: collected for medical clearance; Apunipima has machines available
  ▪ Cons: readings fluctuate regularly and is influenced by other factors, such as stress

— Waist circumference (pre and post)
  ▪ Pros: significantly associated with cardiovascular risk
  ▪ Con: difficult to accurately record

— Pedometer
  ▪ Pro: quantitative measure of physical activity
  ▪ Cons: not accurate if participant doesn’t use all the time, or it feels uncomfortable, lost pedometers. Does not measure all types of physical activity (strength training, swimming, cycling)

— Lifestyle behaviours: physical activity frequency, smoking status, alcohol consumption, fruit and vegetable intake (pre and post)
  ▪ Pros: can be collected at 715, behaviour change more likely in 12 week period
  ▪ Cons: questions can be arduous, not always collected in 715, need a strategy for when and how to collect pre and post program.

— Short Form 12 (SF-12)
  ▪ Aims to measure functional health and well-being from the patient’s point of view
  ▪ The instrument was designed to reduce respondent burden while achieving minimum standards of precision for purposes of group comparisons involving multiple health dimensions
  ▪ Suitable for adults 18 years and older
  ▪ Use of the SF-12 is governed and a licence is required

— Fitness test related to the physical activity component of the LMP. Suggested tests:
  ▪ walking group: distance walked during sessions at start and end of program; time taken to walk certain distance
  ▪ gym based: sit and reach flexibility test, number in a minute for – step ups, (modified) push ups, squats, etc.
  ▪ sports based: time on field before break
  ▪ Pros: demonstrates impact of physical activity program; provides each participant with individual feedback of improvement not related to weight or physiological changes.
  ▪ Cons: Need to consider how effort in pre and post can be consistent