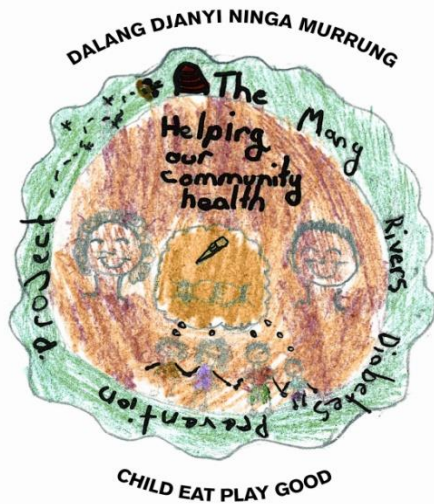


# Many Rivers Diabetes Prevention Project

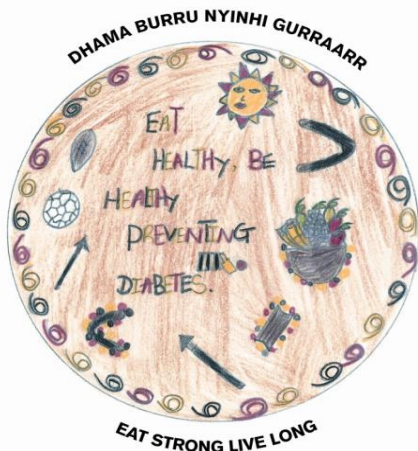


**The impact of an Aboriginal community directed program of research and health promotion.**

Ms Nicole Turner: Senior Project Manager 'Go4Fun'.

Dr Josephine Gwynn: Research Fellow Allied Health Uni of Sydney.

Dedication.



# Background



- Initiative of Durri ACMS Kempsey N.S.W in 2002.
- Response to high rates of Diabetes in Aboriginal Communities.

***‘To prevent children from growing up to get Diabetes’***



- University of Newcastle
- Biripi ACMS in Taree
- Durri ACMS in Kempsey
- Awabakal ACMS Newcastle (2002 – 2006)

# Many Rivers Diabetes Prevention Project

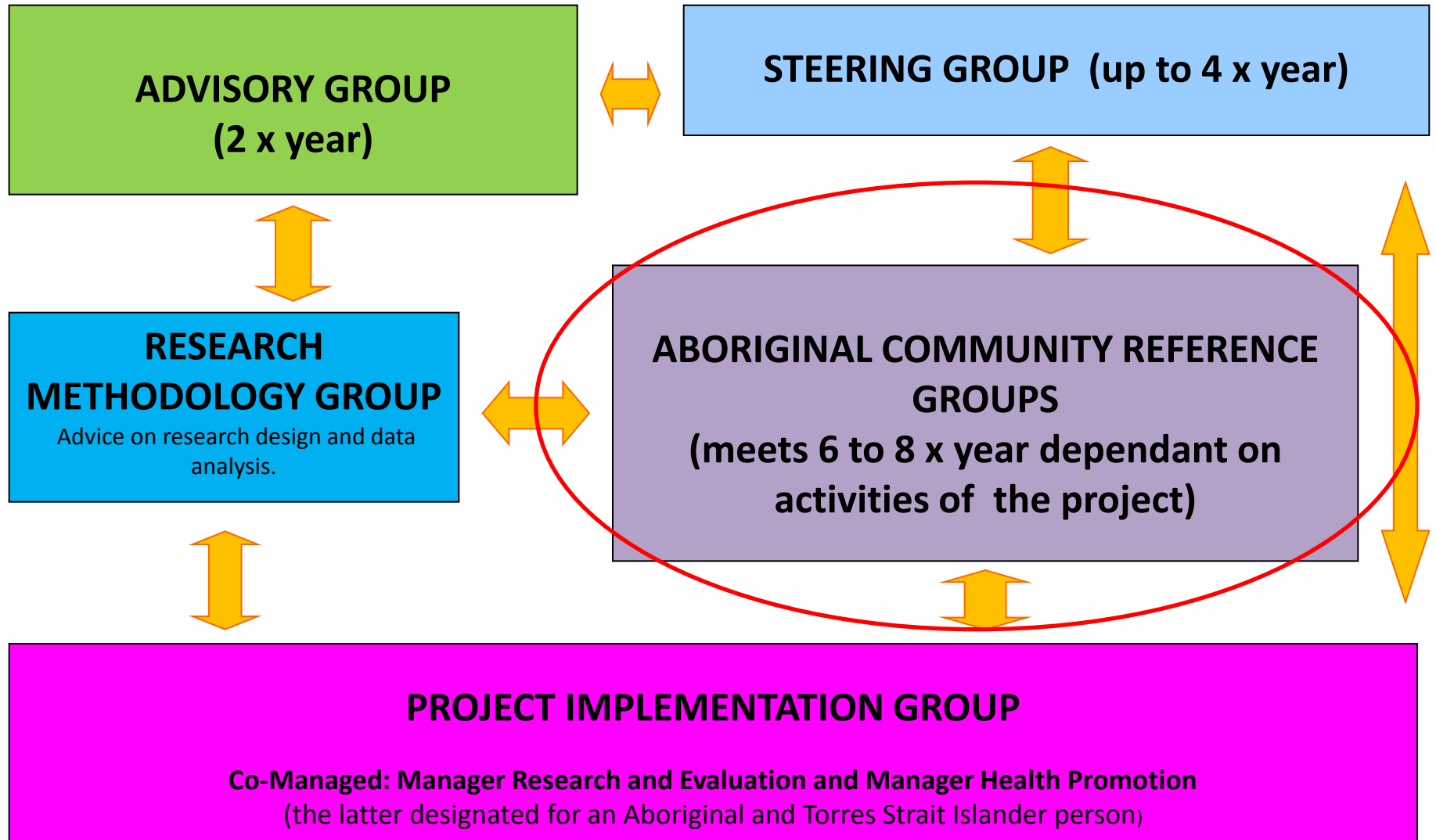
2002 – 2014 (3 Phases)



# MRDPP Phase 3 - AIMS

- **Maintain an Aboriginal community governed research collaboration.**
- **Build capacity.**
- **Describe the determinants** of physical activity participation and healthy food intake for Aboriginal children.
- **Develop and deliver a school based Aboriginal community governed health promotion program.**
- **Evaluate the impact of the health promotion program strategies.**

# Aboriginal Community Controlled Governance Structure



# DOCUMENTS TO SUPPORT COMMUNITY CONTROL AND GOVERNANCE

*Regularly reviewed and updated , and others added to ensure relevance to all matters related to community control of research*



## INTELLECTUAL PROPERTY

- Authorship
- Acknowledgements
- Conferences etc
- Reports
- Artistic and photographic work
- Indigenous cultural and intellectual property
- Sharing of proceedings / benefits from published research or service delivery.

## MEMO'S OF UNDERSTANDING *between*

- All partners: over-arching MOU
- Individual partners:
- External experts /others (such as NGO's) and partners

## DATA AGREEMENTS

- Access to data by experts
- Return of results and data

# AUTHORSHIP CHECKLIST and SELF NOMINATION PROCESS

In order for an individual to qualify for authorship 1 box per section in at least 3 of the 4 criteria must be ticked.

1. I have participated sufficiently in the work to take public responsibility for:

- Part of the content
- The whole content
- The cultural integrity of the document

2. I have made substantial contributions to the:

- Conception and design
- Acquisition of data
- Analysis and interpretation of data
- Drafting of the manuscript
- Cultural elements included in the above.

3. I have made substantial contributions to the:

- Statistical analysis
- Obtaining funding
- Administrative, technical, or material support
- Supervision
- Other (specify e.g. cultural appropriateness of the above)

4. I have provided substantial cultural guidance and/or expert opinion of the cultural content to the:

- Concept and design
- Content
- Drafting of the manuscript
- Acquisition of data
- Analysis

# ENGAGING THE COMMUNITY

*“Community division, fractured governance and poor coordination often exist in high-need communities”*

*NSW Ombudsman 2011: Addressing Aboriginal disadvantage: the need to do things differently.*

- Community reference groups are vital – the tree from whose branches hangs all aspects of the research
- Help researchers navigate the community
- Paid to acknowledge their expertise in community knowledge
- Held in community and by community: this is cultural safety for community
- All project positions dedicated for local Aboriginal people
- TOGETHER: Reference group and Aboriginal employees hold the project together and ensure benefit



# Capacity building

- Research is about capacity building of staff as much as the research.
  - “...giving something back to community...”
  - “...this will last long after you go...”
- Skills acquired have a ‘ripple effect’.
- Survey worker example:
  - Numbers / benefit
  - Training
- Individual, Community and Organisation
- **Factor cost** of capacity building up front into research



# OUTCOME: Capacity building of Aboriginal Workforce: *“This way or no way...”*

- **Individual**

- Diploma’s: Public Health; Community Nutrition = 5
- Degree in Community Nutrition = 1
- Grad Cert in Diabetes Education = 1
- Law Graduate = 1
- Cert 4 in Training and Education = 3
- Casual survey workers = 60
- Women in Leadership Programs = 2
- Conference presentations/state & national committees/publications...



- **Community /Organisational**

- Mentors/Role Models: to peers & wider community
- Leaders: in their community, ACCHS and nationally.
- “Pro Bono work”

# MRDPP Study Design

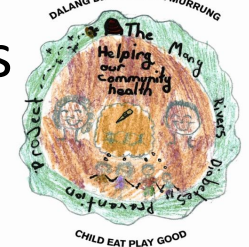
## SETTING.

- 2 regional towns North Coast NSW
- Collaboration with 2 Aboriginal Medical Services and Communities
- Aboriginal community governance structure



## DESIGN

- Repeat Cross Sectional study
- Aboriginal and non-Aboriginal Children aged 10-14yrs
- Survey One – 2007/8
  - 1621 children (16% Aboriginal)
- Survey Two - 2011/12
  - 1231 children (24% Aboriginal)



# MRDPP Strategies

3 Project Officers

## **Nutrition** *School based*

Diabetes Education Package

Supporting Fruit and Water intake

Breakfast and other Nutrition programs

Vegetable /Bush Food Gardens

## **Physical Activity**

Supporting Physical Activity

Traditional Indigenous Games

Midnight Basketball (PCYC)

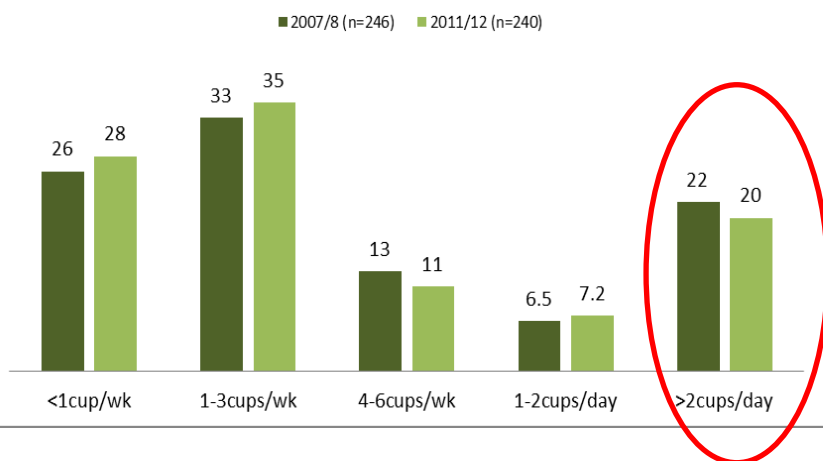
## **Community**

'one off' community events

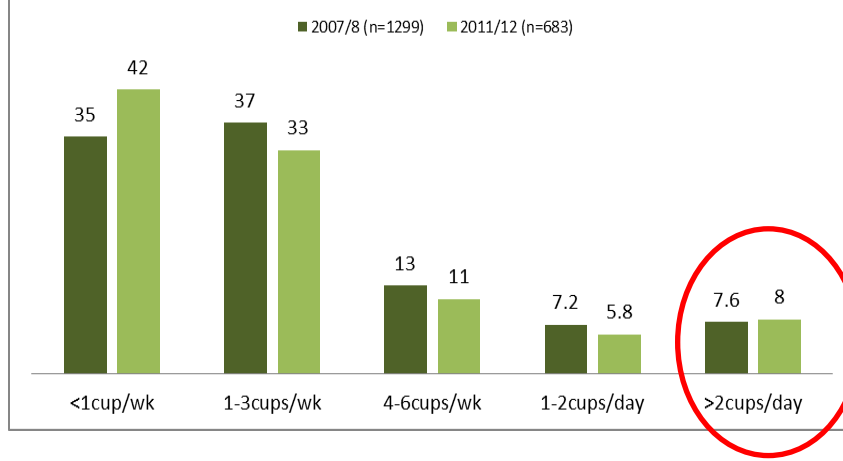
GeoMapping project

# MRDPP – SUGARY DRINKS

**FIGURE 5a:** Change in proportions (%) of Aboriginal CHILDREN consuming SUGARY DRINKS  $p=0.85$



**FIGURE 5b:** Change in proportions (%) of non-Indigenous CHILDREN consuming SUGARY DRINKS  $p=0.02$



## OTHER DRINKS:

### Fruit Juice

↓ non-Indigenous children\*  $\geq 1$  cup/day @ 32% to 22%.  
 ↓ Aboriginal girls\* to more consuming less.

### Diet Soft Drink

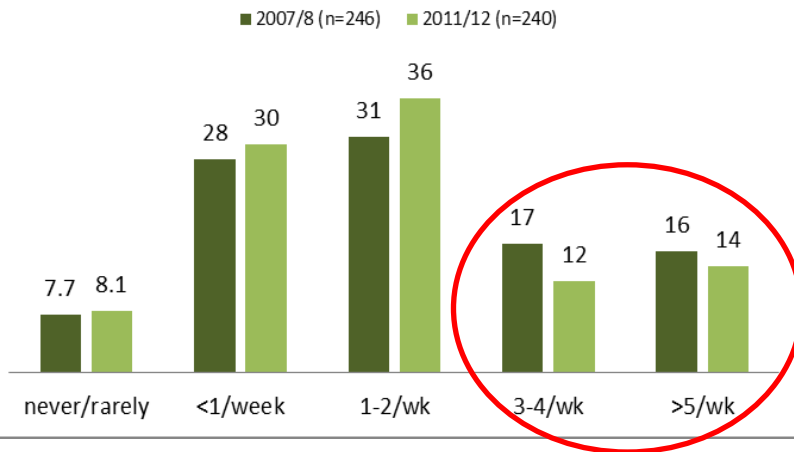
Aboriginal children ( $\approx 16\%$ ) @ 2 x non-Indigenous children ( $\approx 8\%$ ) \*  
 $\geq 4$  cups/week.

### Water

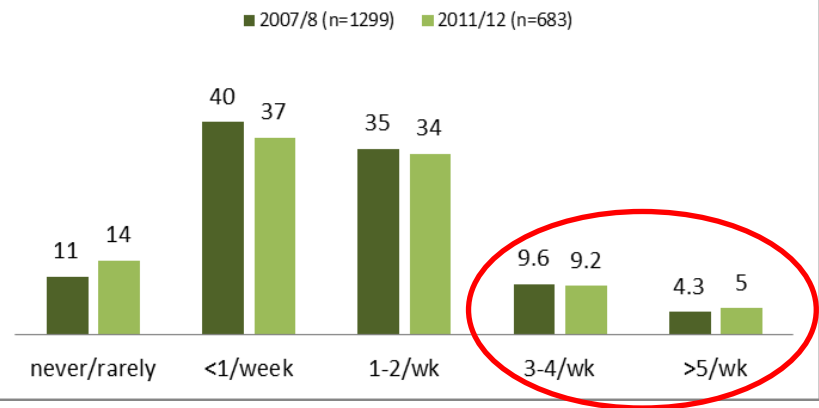
Around 75% of all children  $\geq 2$  cups/day.

# MRDPP – HOT CHIPS

**FIGURE 9a:** Change in proportions (%) of Aboriginal CHILDREN consuming **HOT CHIPS**  $p=0.64$



**FIGURE 9b:** Change in proportions (%) of non-Indigenous CHILDREN consuming **HOT CHIPS**  $p=0.40$



## OTHER:

**HF Processed Meat**  
**White Bread**

> 50% of all children  $\geq 3$  /week; non-Indigenous children\*  $\uparrow$   
Aboriginal boys (89%) consume more white bread than girls  
( $\approx 76\%$ ) or non Indigenous boys (69%)

# WHY

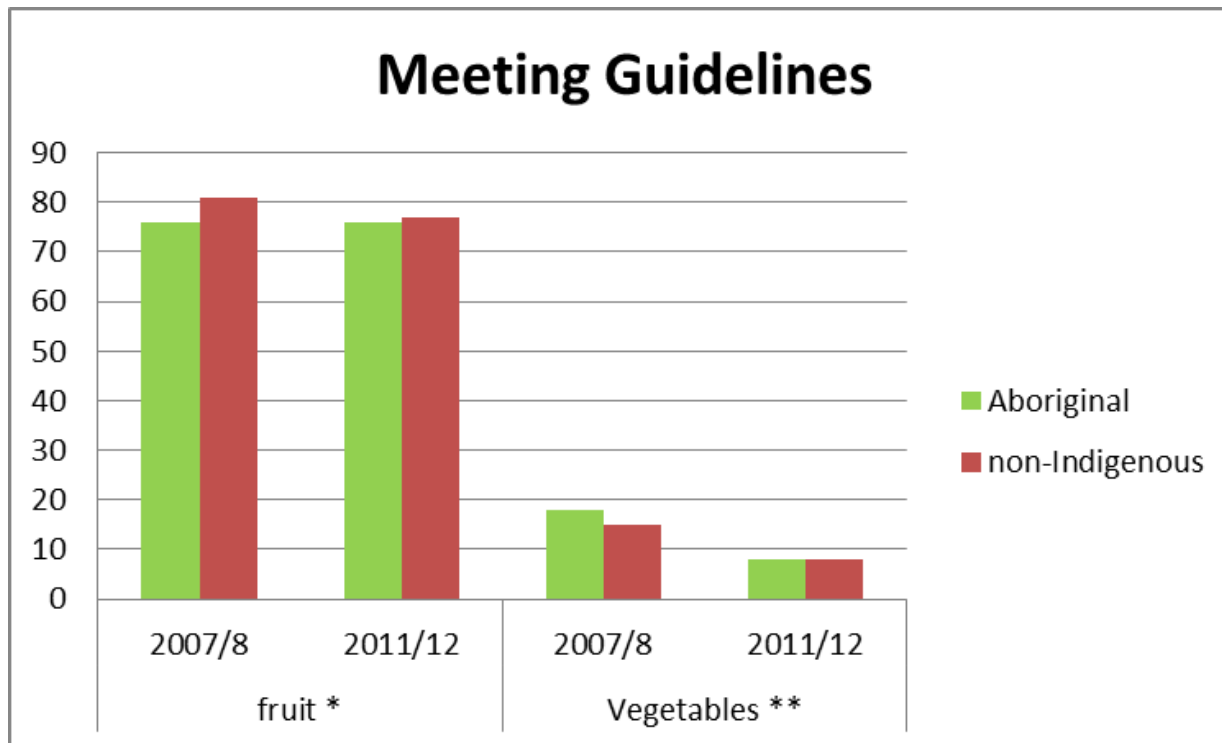
- Removal from traditional lands.
- Dependence on food provision:

*There was no running water. The food was bad – just flour, tea, sugar and bits of beef like the head or feet of a bullock.*

- No /poor cooking facilities.
- Financial dependence (1968).
- Marginalisation.
- Ongoing disadvantage.
- Fast food outlets target disadvantaged communities.

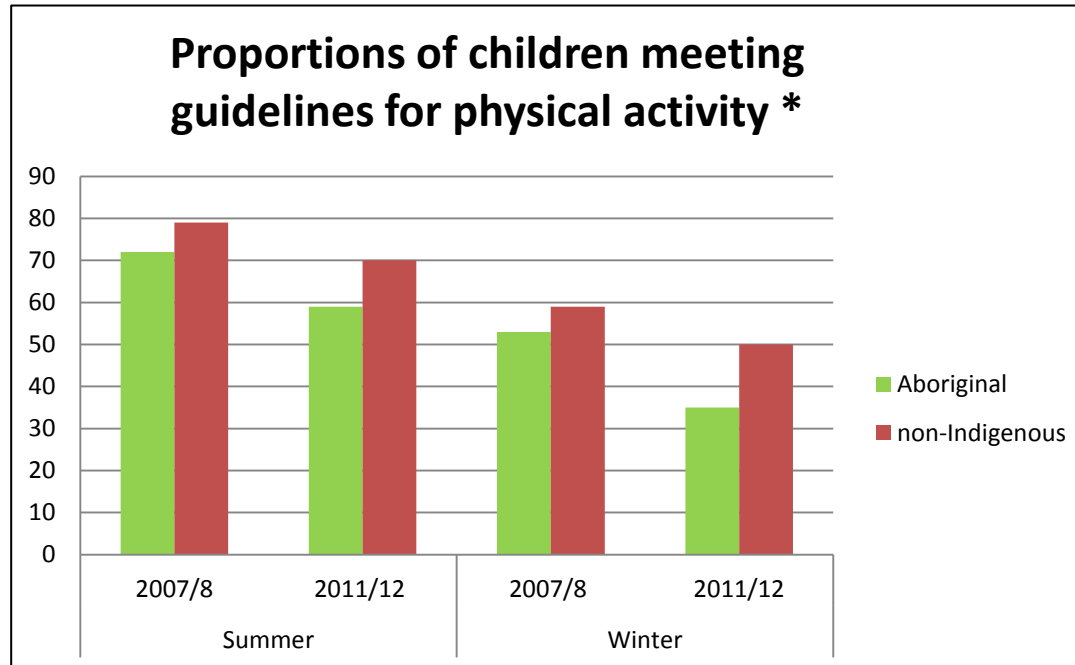


# MRDPP – Fruit and Vegetables





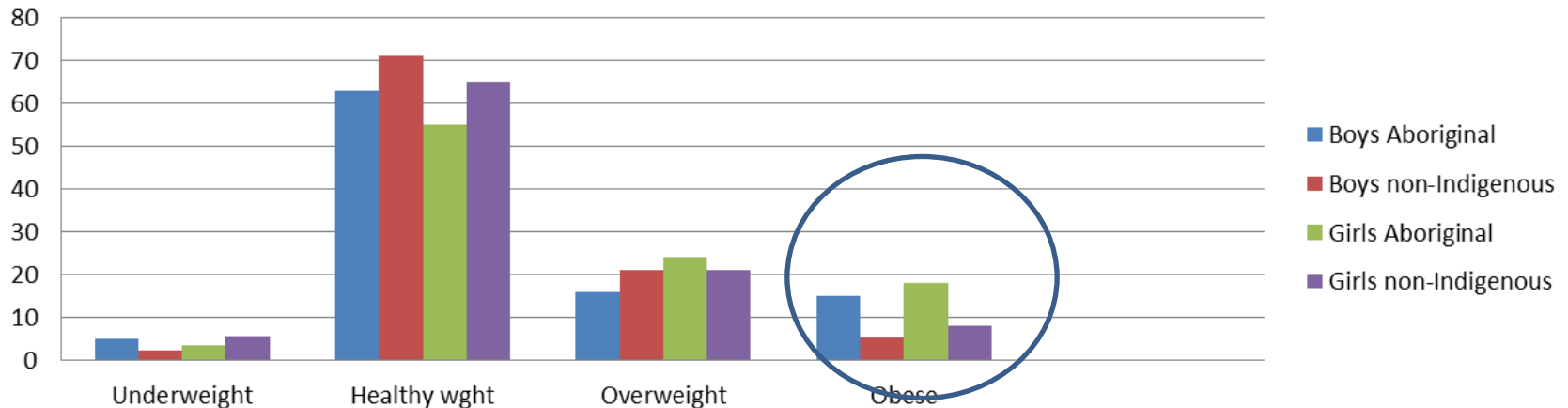
# MRDPP Physical Activity



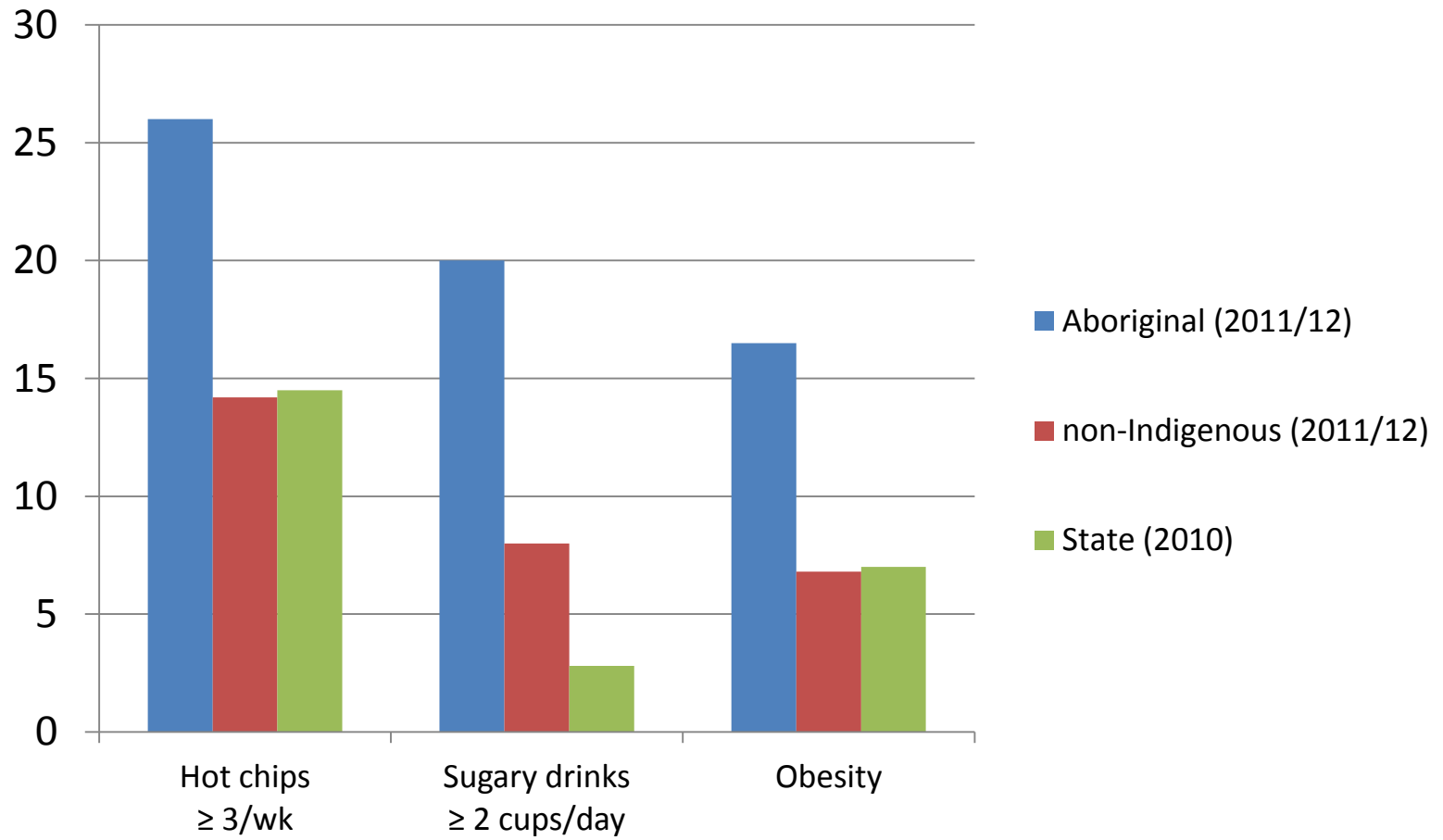
- Higher proportion meeting guidelines in primary school.
- Lower proportions in winter.
- Lots of non-organised activity.
- Barriers to organised activity: cost; transport (public and private); racism.
- MRDPP and State ↓ in proportions meeting recommended PA over past decade.

# MRDPP BMI - remained stable

Proportions of children in each BMI category by gender and Indigenous status



# Nutrition and Obesity



# Determinants

## Environmental

- Availability, Access, Affordability\*
- Public Transport\*
- 'Junk Food' advertising
- Government regulation\*
- Funding, sustainability and support for health promotion programs

## Individual

- Income / income management
- Private Transport\*
- Education levels
- Role Modelling\*
- Physical Activity levels\*

**Historical**

**Racism**

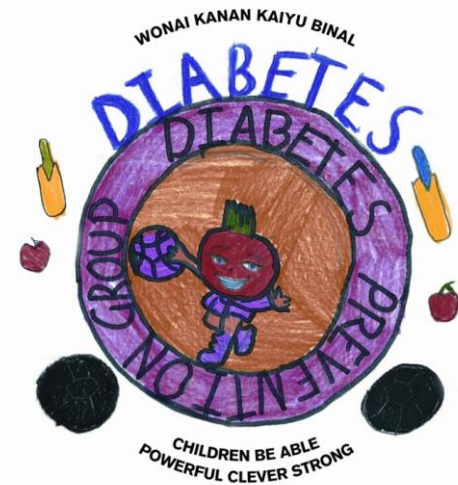
**Cultural**

# RECOMMENDATIONS

- 1. Such projects can positively impact on stubborn health risk factors such as poor nutrition.**
- 2. Governments need to develop a clear plan to address the barriers to healthy food intake and physical activity in rural areas such as those identified by the MRDPP-3 and by other studies nationally:**
  - Further investigation is required to identify and explore the barriers to healthy food intake and physical activity identified by Aboriginal people in this study.
- 3. Target these key health related issues:**
  - Persistently high intakes of sugary drinks, fruit juice, and hot chips by Aboriginal children.
  - Very low reported vegetable intake by all children.
  - Decline in children's physical activity.
  - The ongoing higher proportion of Aboriginal children compared with non-Indigenous children who are classified as obese.

# Acknowledgements

- Children of Taree, Kempsey and Lower Hunter and their families.
- Biripi, Durri and Awabakal AMSs.
- Funding bodies:
  - Centre for Aboriginal Health, NSW Ministry of Health
  - OATSIH
  - NHMRC
  - Telstra Foundation
  - Diabetes Australia,
  - N.S.W Aboriginal Health Promotion Program,
  - Commonwealth Dept of Health and Aging,
  - Eli Lilley



# Acknowledgements

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- Professor John Wiggers: School of Medicine and Public Health, University of Newcastle.
- Professor Vicki Flood: Faculty of Health Sciences, University of Sydney and St Vincent's Hospital.

## **Others:**

- Community Reference Groups.
- Steering and Advisory Committees.
- Project Field Teams.
- Academic Advisors.