

2013 KNOCKOUT HEALTH CHALLENGE

EVALUATION FINDINGS

Prepared by Centre for Epidemiology and Evidence



Background

- Since 2012, NSW Health has partnered with NSW Rugby League to run the Knockout Health Challenge (the Challenge), a community-led weight loss and healthy lifestyle program for Aboriginal communities in NSW. The Challenge is part of the Culture Health Communities Strategy, which aims to strengthen community capacity to improve the health and wellbeing of Aboriginal people in NSW.
- In 2013, Aboriginal communities across NSW competed in the Challenge. Teams competed to achieve the greatest weight loss in a 16 week period (March–June), followed by a 12 week maintenance period (July–September).
- Teams participated in a range of weight loss and healthy lifestyle activities such as group training, gym sessions, and cooking workshops. Participants were also able to join the NSW Get Healthy Information and Coaching Service, and receive motivational messages and support from Aboriginal National Rugby League players via Facebook. The 3 teams with the greatest weight loss percentage received a funding grant to promote healthy lifestyles in their community.



Evaluation methods

The evaluation had 2 parts: we assessed participants' weight and health behaviours at 4 time points, and we conducted interviews with team managers and the state implementation team. The evaluation was approved by the Aboriginal Health & Medical Research Council Ethics Committee.

1. Weight and health behaviours

- Participants were invited to provide information on their weight and health behaviours at 4 time points: at the start of the Challenge, at the end of the Challenge, 5 months after the Challenge, and 9 months after the Challenge.
- Participants' weight, height and waist circumference were measured by a health professional at the start and end of the Challenge. Participants also provided information on their age, gender, chronic disease diagnoses, and self-reported health behaviours (fruit and vegetable consumption, physical activity levels, and smoking status).
- At 5 and 9 months after the Challenge, participants were invited to complete a telephone interview, to provide self-reported information about their weight and health behaviours. At 5 months after the Challenge, participants were also invited to visit a health professional to have their weight and waist circumference objectively measured.

2. Interviews with team managers

Interviews were conducted with team managers and the state implementation team about their experiences of the Challenge, barriers and enablers to participation, types of activities they took part in during the Challenge, and benefits of participation.



Results

Participation in the evaluation

- 586 people registered for the 2013 Knockout Health Challenge, in 22 teams across NSW: 17 in rural or regional areas and 5 in metropolitan areas.
- The number of participants who provided information varied for each time point: 65% of participants (n=379) provided information at the start and end of the Challenge, 46% provided information 5 months after the Challenge (n=271), and 33% provided information 9 months after the Challenge (n=195). Twenty-one per cent of participants (n=123) provided information at all 4 time points.
- 10 team managers (43% of managers), and 3 members of the state implementation team, participated in interviews.

Participant Characteristics

- The average age of participants was 40 years, ranging from 18 to 82 years.
- The majority of participants were women (72%). At the start of the Challenge, the average weight of participants was 98.4 kg and the average BMI was 35.7 kg/m². This corresponded to a classification of Obese Class 2 and a severe risk of co-morbidities. The average waist circumference was 112 cm for females and 117 cm for males.
- 41% per cent of participants had a previous diagnosis of, and/or were being treated for, a health condition associated with weight, physical activity and diet.

Participation in the Challenge

- On average, participants were involved in 4 different weight loss or healthy lifestyle activities. The most common activities were monthly weigh-ins (87%), team training sessions (86%), visits to health care providers (78%), and team meetings (73%).

Health Impact of the Challenge

The information presented below is for the participants (n=123) who provided information at all 4 time points. Results are similar when information for all participants is considered. Results are summarised in Table 1.



Weight

- During the Challenge, participants lost an average of 2.1 kg, reduced their waist circumference by an average of 3.7 cm, and reduced their BMI by an average of 0.8 kg/m² (all p<0.001).
- The most common pattern of weight loss over time was for participants to lose weight during the Challenge, and to continue to lose weight in the 5 months after the Challenge. On average, at 9 months after the Challenge, participants had regained some weight, but still weighed less than at the start of the Challenge.
- Overall, from the start of the Challenge to 9 months after the Challenge, participants lost on average 2.3 kg. This weight loss was statistically significant (p<0.001).



Physical Activity

- During the Challenge, the average number of days participants were physically active for 30 minutes or more increased from 2 days to 3 days per week (p<0.001). Participants were less active at 5 and 9 months after the Challenge, but remained more active than at the start of the Challenge.
- The proportion of participants meeting the Australian physical activity recommendations increased during the Challenge and continued to increase in the 5 months after the Challenge. The proportion of participants meeting recommendations was lower at 9 months after the Challenge but remained higher than at the start of the Challenge.



Diet

- **Fruit:** During the Challenge, the average number of servings of fruit per day increased by 0.3 serves (p=0.016) from 1.6 to 1.9 serves. This was maintained at 5 and 9 months after the Challenge. Similarly, the proportion of participants consuming the recommended daily serves of fruit increased from 49.5% to 69.7% (p=0.002). This was maintained at 5 and 9 months after the Challenge.
- **Vegetables:** During the Challenge, the average number of servings of vegetables per day increased by 0.4 serves (p=0.007), from 2.6 to 3.0 serves per day; however, this was not sustained at 5 or 9 months after the Challenge. Similarly, there was a small increase in the proportion of participants consuming the recommended daily serves of vegetables during the Challenge; however this was not statistically significant.

Feedback from participants and team managers

- The Challenge was highly valued by both participants and team managers. Most team managers recognised that the Challenge was not only about losing weight but also brought people together to improve their health through lifestyle change and building social connections.
- Team managers (and the state implementation team) reported that the Challenge reached Aboriginal people who would not otherwise be reached by existing health promotion interventions.
- For participants, their main motivations were to lose weight (86%) and get healthy (86%). Participants also reported psychosocial benefits, including feeling more socially connected, improved self-esteem, and feeling less stressed and happier. Participants also reported community benefits, including community pride and increased community connectedness.



Key Messages

- Challenge participants lost weight, reduced their BMI and waist circumference, and increased their physical activity and fruit consumption. These changes were maintained up to 9 months after the Challenge.
- The profile of participants suggests the program successfully reached those most at risk of chronic health conditions. Men were less likely than women to participate and recruitment strategies for future Challenges may seek to increase male participation.
- Team managers and participants gave very positive feedback about the Challenge. Important factors in the success of the Challenge were that it was led by local Aboriginal communities and that there was flexibility for teams to adapt the Challenge to meet their local needs.

Table 1: Summary of impact of the 2013 Knockout Health Challenge on weight and health behaviours.

Measure	N	Measure at start of Challenge (SD)	Change at subsequent time points compared to the start of the challenge		
			End of Challenge (95% CI)	5 months after the Challenge (95% CI)	9 months after the Challenge (95% CI)
Mean weight (kg)	123	97.9 (20.2)	-2.1* (-3.0, -1.3)	-4.3* (-5.7, -2.9)	-2.3* (-3.5, -1.1)
Mean BMI (kg/m ²)	123	35.8 (6.7)	-0.8* (-1.1, -0.5)	-1.5* (-2.0, -1.0)	-0.8* (-1.3, -0.4)
Mean waist circumference (cm)	352	112.1 (15.5)	-3.7* (-4.5, -3.0)		
Mean number days active for 30mins or more	109	2.0 (1.8)	0.9* (0.4, 1.3)	0.7* (0.3, 1.1)	0.4 (-0.0, 0.9)
% respondents sufficiently active	109	10.1 (3.0)	6.4 (2.6, 12.8)	10.1* (5.1, 17.3)	4.6 (1.5, 10.4)
Mean number serves of vegetables per day	109	2.6 (1.4)	0.4* (0.1, 0.7)	0.1 (-0.2, 0.4)	-0.1 (-0.4, 0.2)
% eat recommended daily serves of vegetables	109	9.2 (3.0)	6.4 (2.6, 12.8)	5.5 (2.0, 11.6)	-2.8 (-7.8, -0.6)
Mean number serves of fruit per day	109	1.6 (1.0)	0.3* (0.1, 0.6)	0.4* (0.1, 0.6)	0.3* (0.1, 0.6)
% eat recommended daily serves of fruit	109	49.5 (5.0)	20.2* (13.1, 28.9)	21.1* (13.9, 30.0)	18.4* (11.6, 26.9)

*Statistically significant at $p < 0.05$.

Thank you to all the communities and individuals who participated in the 2013 Knockout Health Challenge and the evaluation.

For further information about the evaluation of the Knockout Health Challenge please contact Erin Passmore, Centre for Epidemiology and Evidence, on (02) 9391 9770 or epass@doh.health.nsw.gov.au