



Central Australian
Aboriginal Congress
ABORIGINAL CORPORATION | ICN 7823

Shake It Off:

A Very Low Energy Diet Protocol to Reverse Diabetes in Remote Aboriginal Communities



Grace Nell - Dietitian

Objectives

- A brief history of Shake It Off
- The Shake It Off Algorithm
- Very Low Energy Diet (VLED) resources
- Outcomes so far and lessons from Utju

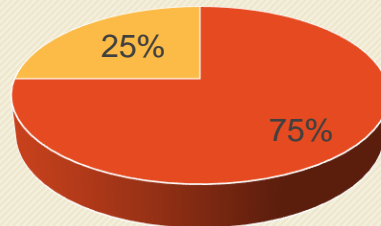


A little about Utju



It's a big problem:

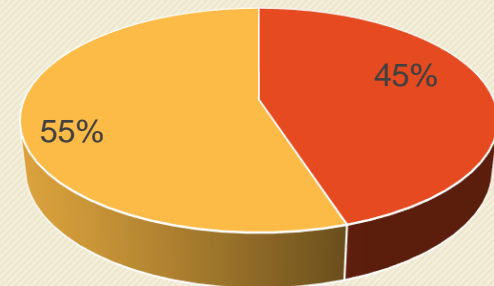
Adults with overweight or obesity



■ Overweight or obese ■ normal weight

National average 67% 2017-18

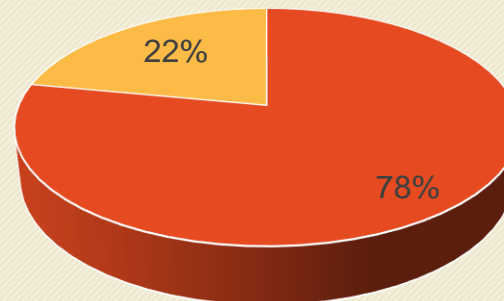
Adults with Diabetes



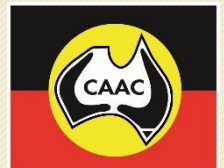
■ with diabetes ■ no diabetes

National average 4.9% 2017-18

Control of diabetes in Utju



■ HbA1c >7% ■ HbA1c <7%



The burden of illness is significant

- Anangu are being diagnosed younger, with sequelae from a young age



- Thoughtful responses are needed urgently



THE LANCET

ARTICLES | [VOLUME 391, ISSUE 10120, P541-551, FEBRUARY 10, 2018](#)

Primary care-led weight management for remission of type 2 diabetes (DiRECT): an open-label, cluster-randomised trial

[Prof Michael EJ Lean, MD](#) [†] • [Wilma S Leslie, PhD](#) • [Alison C Barnes, PGDip](#) • [Naomi Brosnahan, PGDip](#) • [George Thom, MSc](#) • [Louise McCombie, BSc](#) • et al. [Show all authors](#) • [Show footnotes](#)

Published: December 05, 2017 • DOI: [https://doi.org/10.1016/S0140-6736\(17\)33102-1](https://doi.org/10.1016/S0140-6736(17)33102-1)



What is a Very Low Energy Diet?

THREE SHAKES

3 shakes + 2 cups veggies + 2L water



12-20 weeks

TWO SHAKES

2 shakes + 1 meal + 2 cups veggies + 2L water + 1 fruit + 1 dairy



2-4 weeks

ONE SHAKE

1 shake + 2 meals + 2 cups veggies + 2L water + 1 fruit + 1 dairy



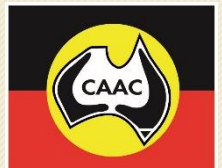
2-4 weeks

STAY HEALTHY

3 meals + 2 fruit + 2 cups veggies + 1 dairy + 2L water
The new normal



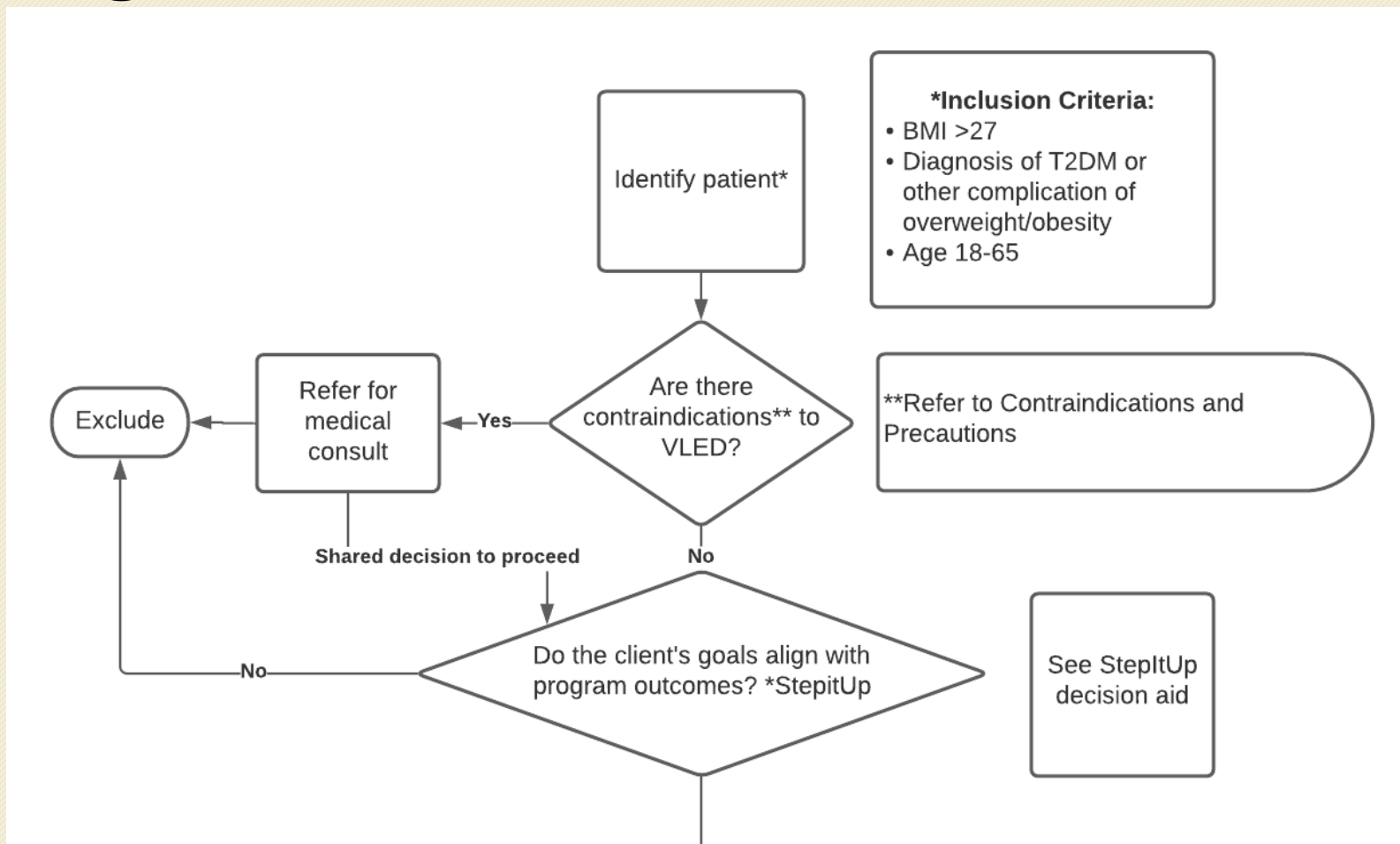
A new normal



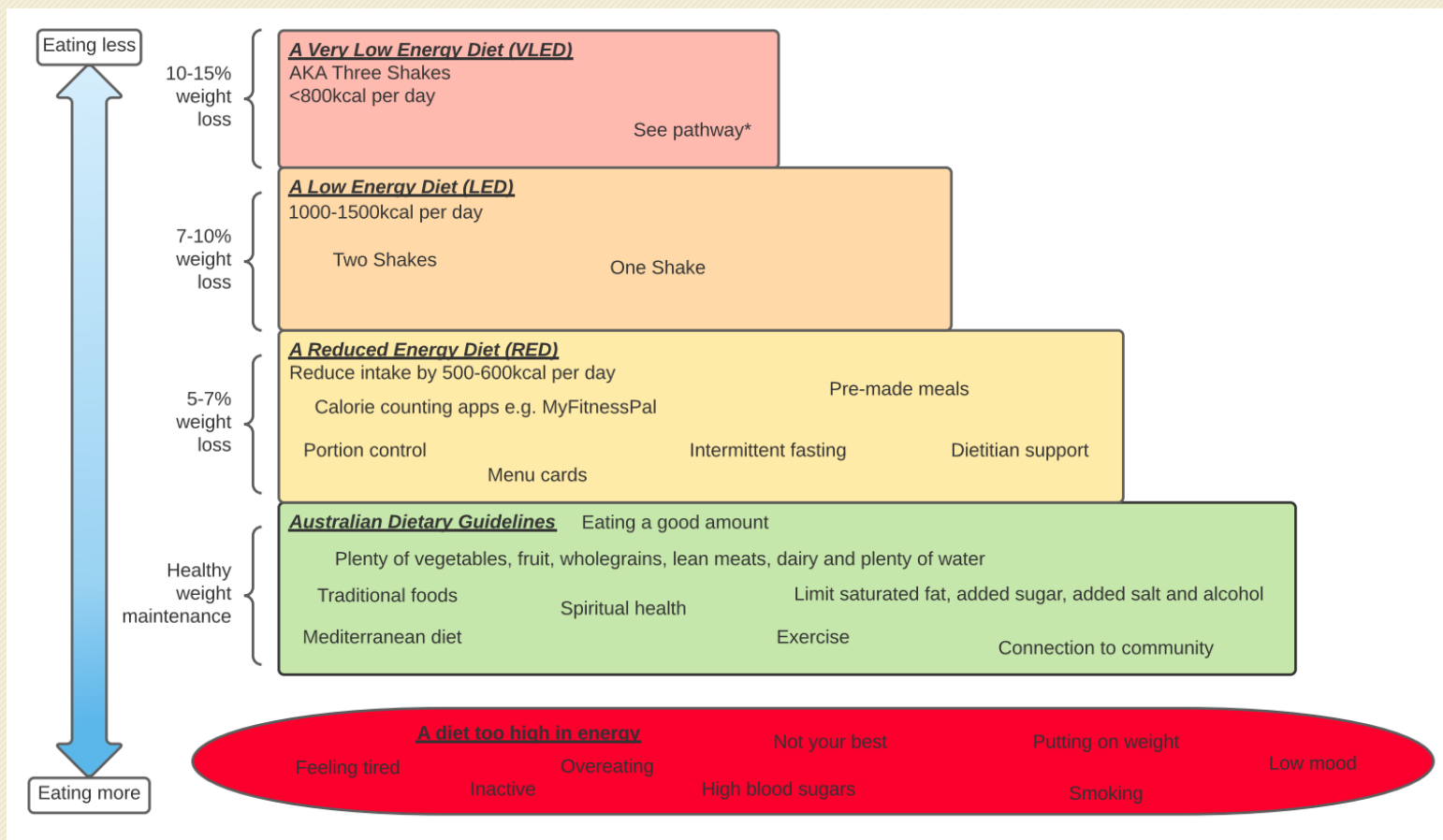
Shake It Off: Getting started



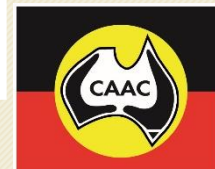
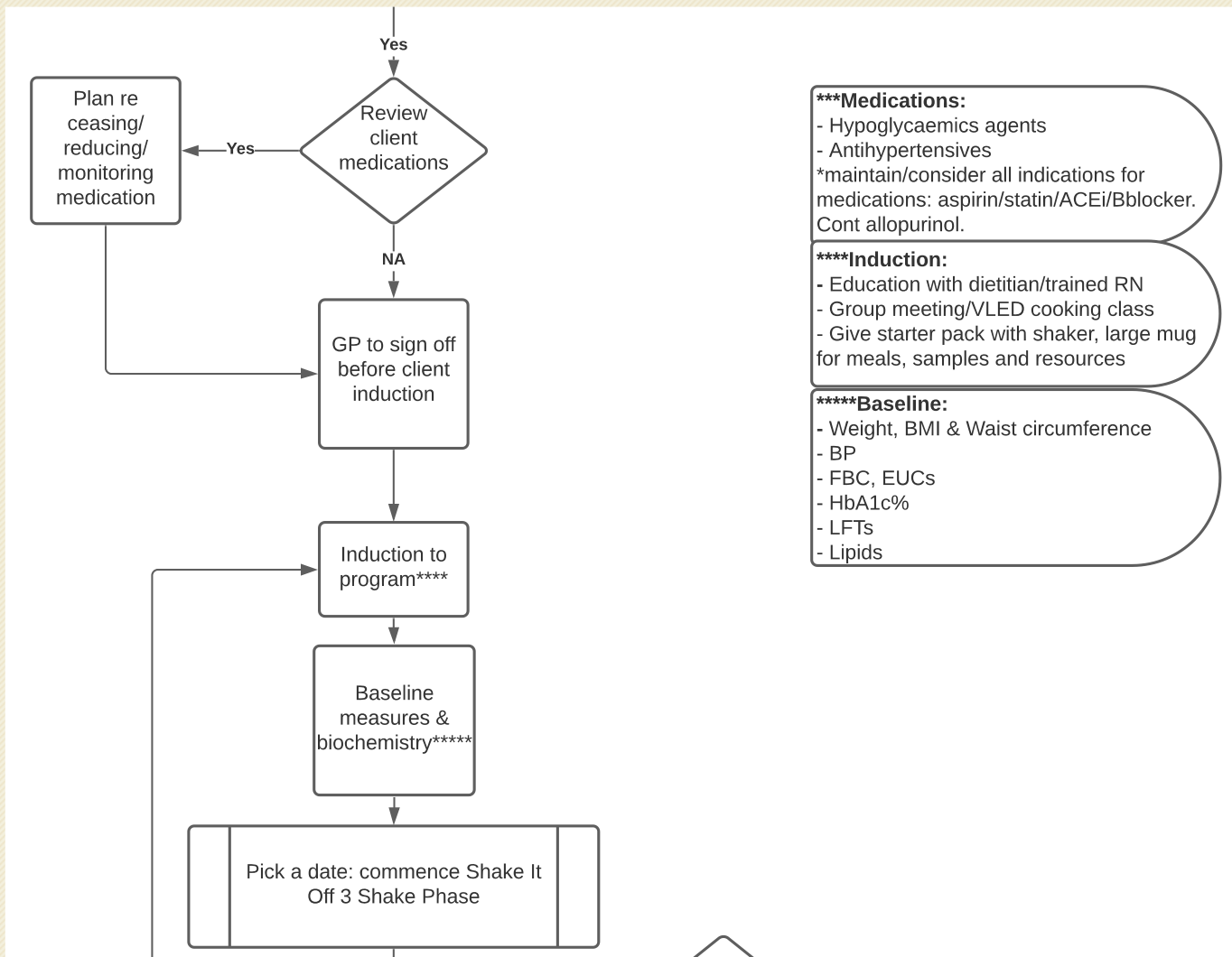
Shake It Off: Very Low Energy Diet Algorithm



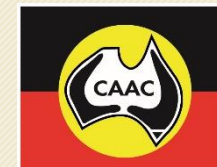
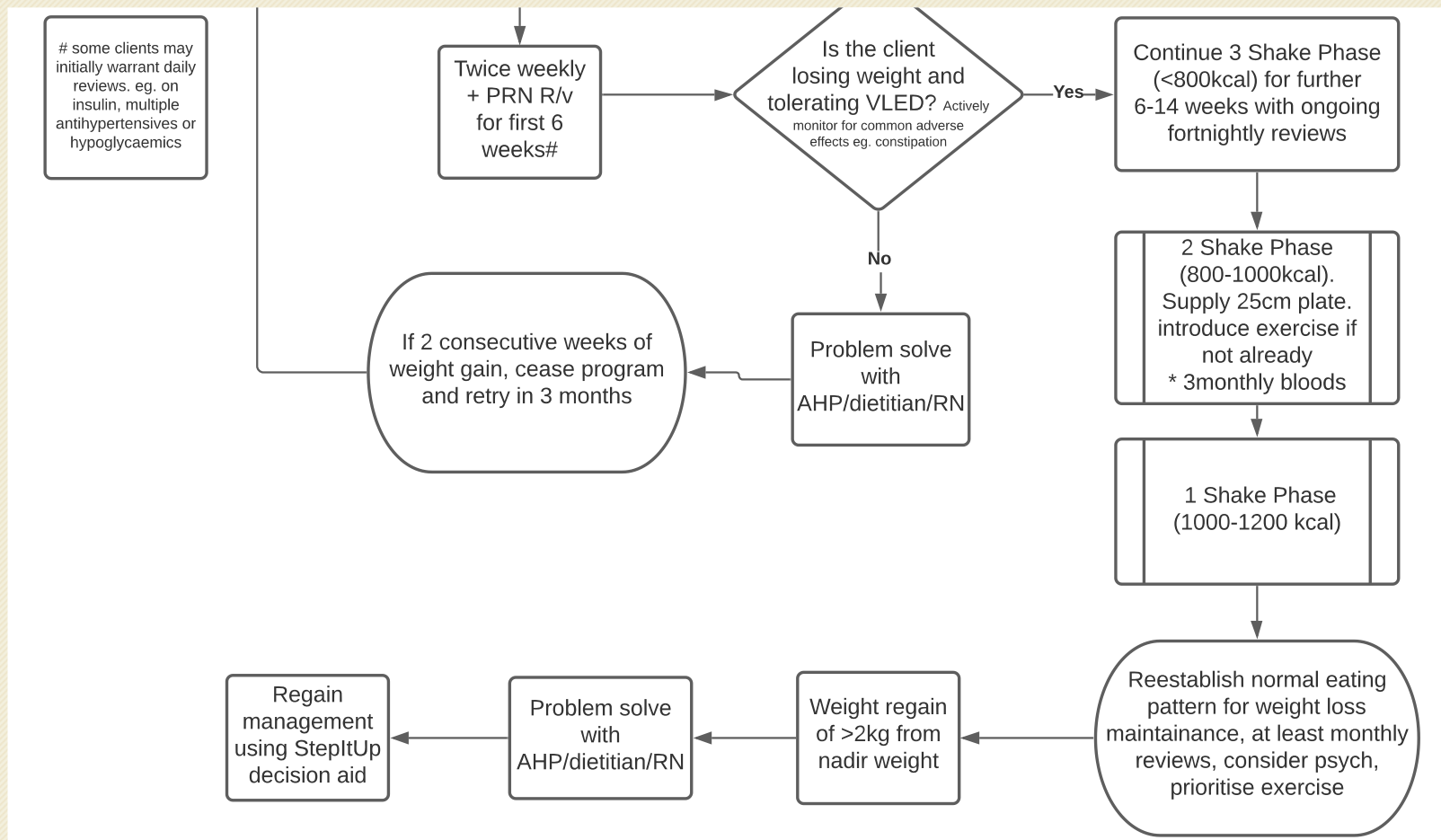
SteptUp: aligning expectations



Shake It Off: Very Low Energy Diet Algorithm



Shake It Off: Very Low Energy Diet Algorithm



Collaboration with the store:

- To ensure appropriate foods are available
- Utju Store showed a real willingness to participate, ordering some diet products



Contextually relevant resources

- Using products available in Utju, we developed menus for Anangu with items available in their store



SHAKE IT OFF: VERY LOW ENERGY DIET



Resource Pack Key

Three Shakes

**Two Shakes
&
One Shake**

**Stay
Healthy**

CHOOSE THESE DRINKS

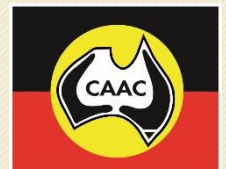


Have your tea/coffee black or with
30mL skim milk, and no sugar





CHOOSE THESE FOODS





MAKE IT TASTY





LEAVE IT FOR NOW





VEGGIE SOUP



2 serves



1. Mix veggies

2. Cook in a pot

3. Stir and enjoy



GARDEN SALAD



1. Chop veggies

2. Add olive oil

3. Stir and enjoy

2 serves





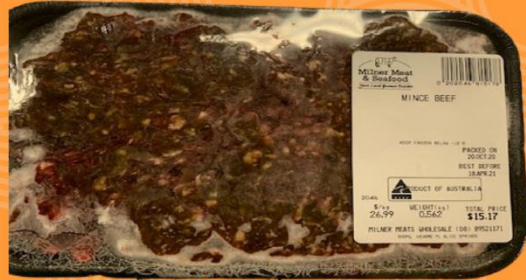
EGG VEGGIE SCRAMBLE

2 serves





EASY BEEF CHOW MEIN



4 serves

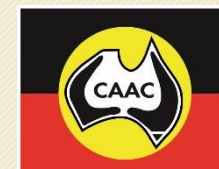




SPAG BOL



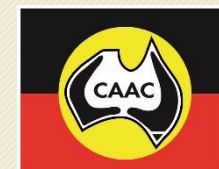
4 serves



CREAMY CHICKEN & RICE



4 serves

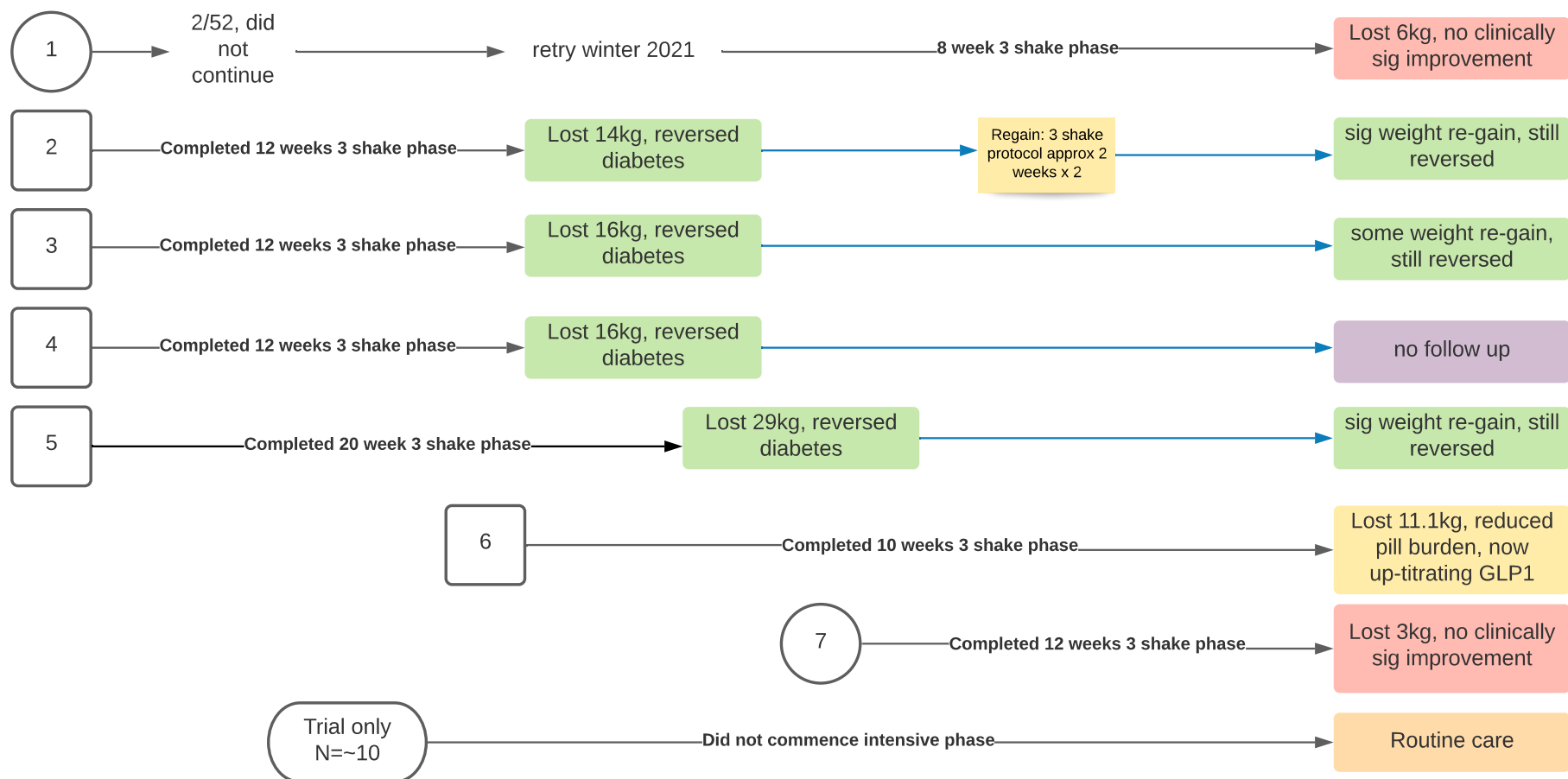


Initial cluster in Utju

- Initial cluster of 5 participants starting Jan 2021
- all diabetic
- Diagnosed between 1-10 years ago

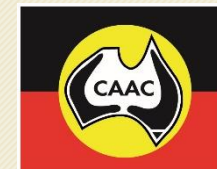


Results so far



January 2021

October 2021



Participant and community feedback

- Overwhelmingly positive
- Many have reported significant improvements in the QOL, sleep, energy, snoring, not taking tablets, buying new clothes
- Started playing footy again!



Participant identified barriers

- Smell of KFC, sorry business, travel, significant life stressor, celebrations
- Family offering inappropriate food, or eating participant's VLED meals
- Truck deliveries



How will we change what we do:

- Clusters, rather than ad-hoc
 - Possibly households/family groups
 - 3-4 clusters per year, with bursts of input from our dietitian
 - Allows us to prioritise equipping sessions at initiation and transition phases with dietitian
 - Esp for clients gaining weight
 - Plan for appropriate staff to be available to assist participants – EP, dietitian roles to be advertised









Keeping the weight off

- All participants have regained at least some weight
- hyperphagia/ hypometabolism
- There is some evidence that significant fluctuations in weight can be harmful
- Intervention group weight was lower at 2years than standard care in DiRECT



Keeping the weight off

Brief formula low-energy-diet for relapse management during weight loss maintenance in the Diabetes Remission Clinical Trial (DiRECT)

[Brosnahan, N.](#) , [Leslie, W.](#), [McCombie, L.](#), Barnes, A., [Thom, G.](#) , [McConnachie, A.](#) , [Messow, C. M.](#) , [Sattar, N.](#) , Taylor, R. and [Lean, M. E. J.](#)  (2021) Brief formula low-energy-diet for relapse management during weight loss maintenance in the Diabetes Remission Clinical Trial (DiRECT). *Journal of Human Nutrition and Dietetics*, (doi: [10.1111/jhn.12839](https://doi.org/10.1111/jhn.12839)) (PMID:[33406285](https://pubmed.ncbi.nlm.nih.gov/33406285/)) (Early Online Publication)



Text

225819.pdf - Accepted Version

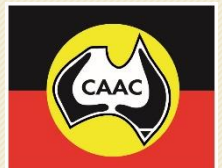
Restricted to Repository staff only until 6 January 2022.

380kB

80% of participants were offered relapse weight management plans within 2 years

- 1/3 did manage to lose the weight they gained

Possible role for GLP1 analogues moving forward – although STEP4 trial showed significant weight regain promptly on cessation of semaglutide



Sustainably resourcing to meet demand

- Funding– who pays?
 - Optislim is about \$4/day retail (\$336 for 12 weeks) -
 - Optifast/Optislim Platinum Plus (higher protein) about \$8/day
- Sustaining trained staff
- Needs to be primary care focus, and widely available. A champion in each clinic.




Monitoring and evaluation

Add Clinical Item - PETERS, DEANNA 99yrs Current Patient Female

VLCD Intial consult / 3 shake phase

Christine Ellison, Millennium Health Service (Aboriginal Health Service) 11/11/2021 15:17:31

 No interaction decision support is available for this 'procedure' clinical item.

Comment

Display on Main Summary ☐

Display on _Obstetric Summary ☐

Performed date

11/11/2021

Actual duration (minutes)

Weight

kg

(No previous values)

Weight Change

(No previous values)

Height

cm

(No previous values)

Click in the BMI box to automatically calculate from last recorded weight and height.

BMI

kg/m2

(No previous values)

Waist circumference

cm

(No previous values)

BP - Systolic blood pressure

mm Hg

(No previous values)

BP - Diastolic blood pressure

mm Hg

(No previous values)

Blood glucose level - random

mmol/L

(No previous values)

Medical Review

(No previous values)

Date of diagnosis of Type 2 Diabetes


(No previous values)

Pathology Request: FBC

☐

(No previous values)

Request Pathology Investigations

 Request Investigation

Exercise level

(No previous values)


Client Goals


(No previous values)


Start Date


(No previous values)

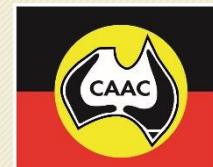
Viewing right: Common

 Print & Save

 Save

 Cancel

 Help



Questions?

SHAKE IT OFF

