PUBLIC BARIATRIC SURGERY IN ABORIGINAL AND TORRES STRAIT ISLAND PATIENTS

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AUSTRALIA

CONFLICTS OF INTEREST

- Nil

WHAT WE KNOW GLOBALLY

- In 2022, 1 in 8 people in the world were living with obesity.
- In 2022, 2.5 billion adults (18 years and older) were overweight. Of these, 890 million were living with obesity.
- At the 75th World Health Assembly in 2022, endorsed the WHO Acceleration Plan to Stop Obesity.

People living with obesity are at a greater risk from other chronic diseases such as diabetes, cardiovascular disease and certain cancers

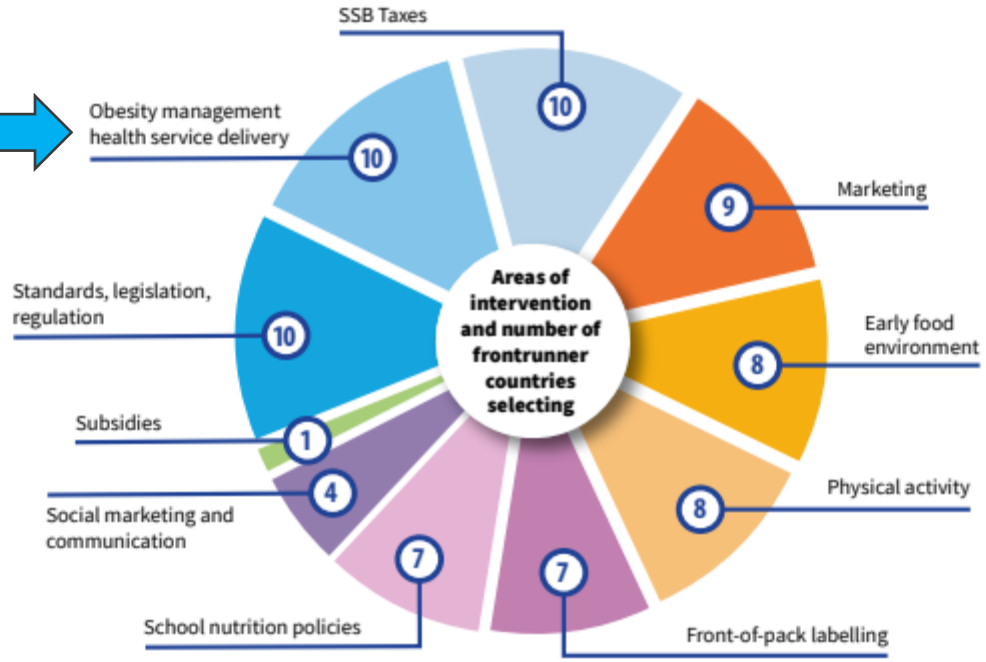
"Obesity-related diseases drain scarce resources from health systems and negatively impact economies"

Dr Tedros Adhanom Ghebreyesus, WHO Director-General.[3]

WHAT

- Obesity is
  stroke, an
  and prem
- MBS is the
  - Signficant
  - Improvem

Figure 2. Obesity interventions prioritized by frontrunner countries



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Economic warning

Current annual global costs of obesity US$ 990 billion

Annual cost of obesity as percentage of total GDP in 2060 3.29% on average across all countries

The world cannot afford NOT to act!

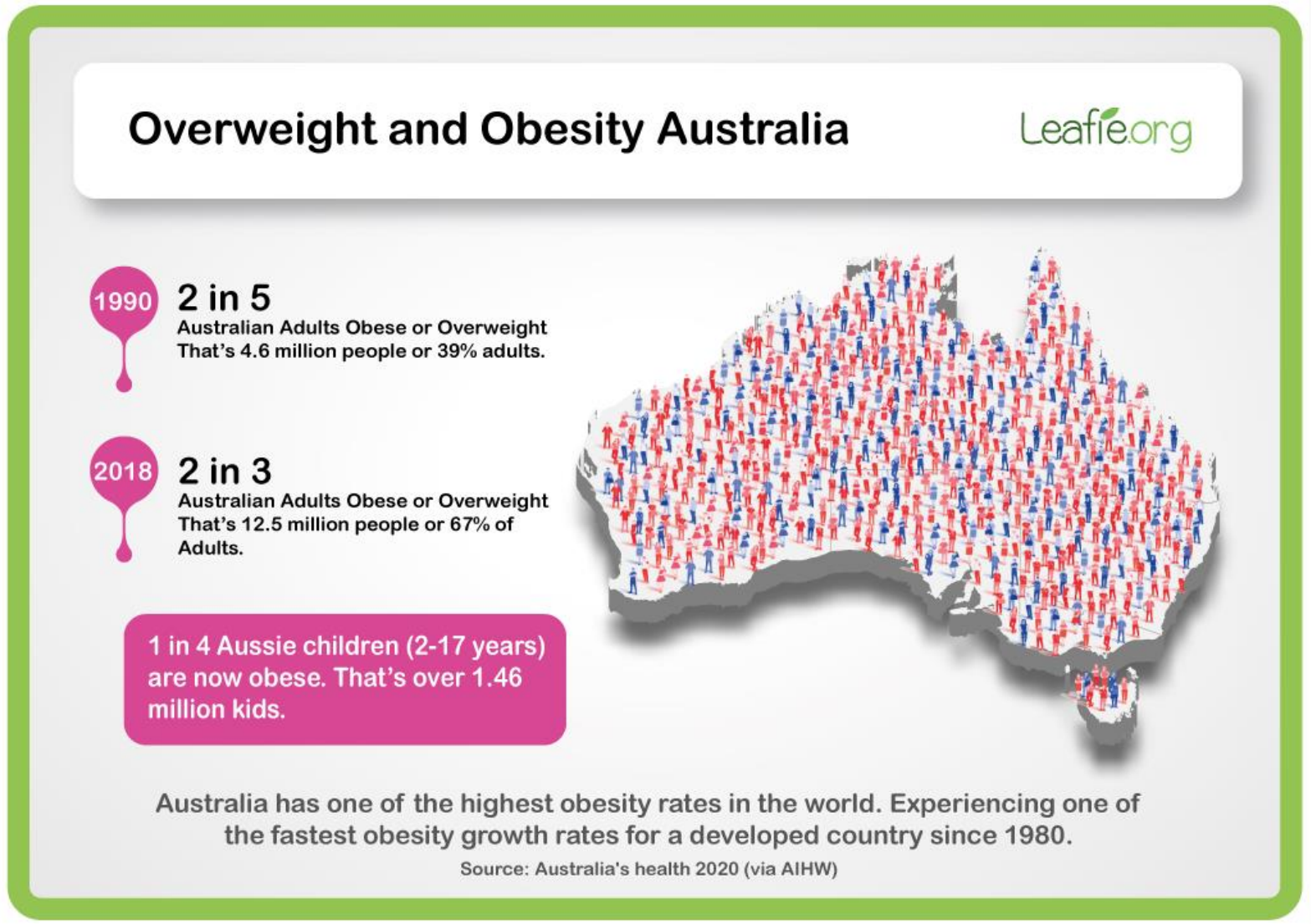
Potential total savings US$ 429 billion per year on average

(if overweight and obesity prevalence *is reduced by 5% between 2020* and *2060*)

Okunogbe A, Nugent R, Spencer G et al. Economic impacts of overweight and obesity: current and future estimates for 161 countries. BMJ Global Health. 2022, Vol. 7, p. e009773.
Obesity: missing the 2025 global targets: trends, costs and country reports. 2020. World Obesity Federation. https://www.worldobesity.org/resources/resource-library/world-obesity-day-missing-the-targets-report.

Source: https://www.worldobesityday.org/assets/downloads/Factsheet_-_Englis

WHAT WE KNOW IN AUSTRALIA

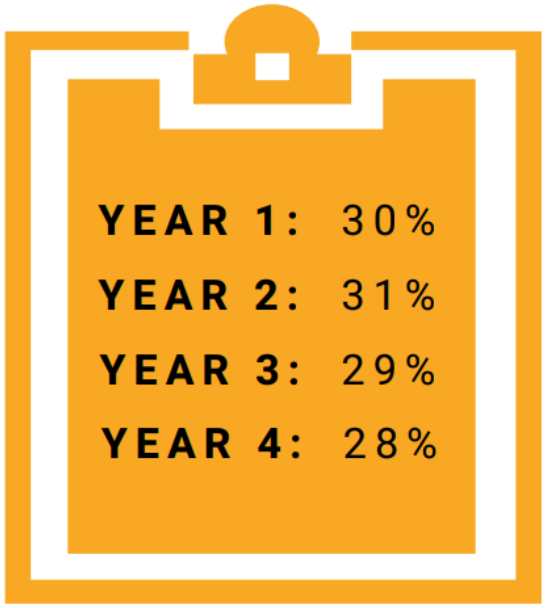


WHAT WE KNOW – METABOLIC BARIATRIC SURGERY

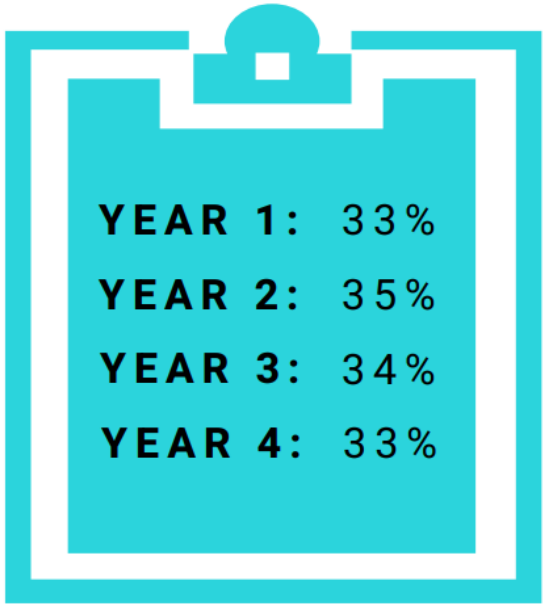
Average % total weight loss by type of primary surgery

of Australian bariatric patient data with 1, 2, 3 and 4 year outcomes

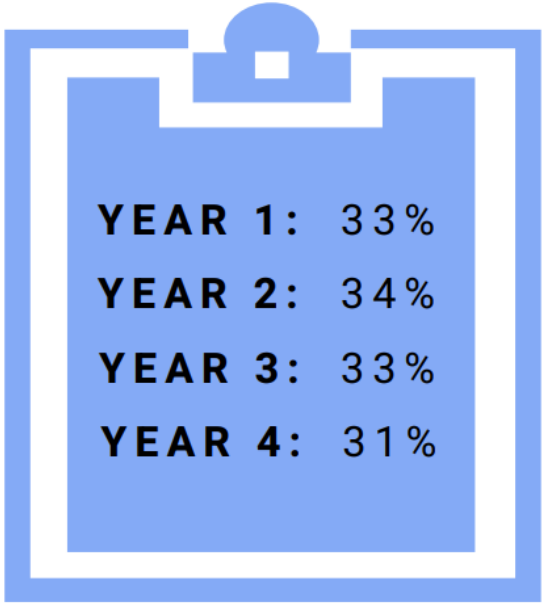
Average % total weight loss **after a sleeve gastrectomy**



Average % total weight loss **after a one anastomosis gastric bypass**

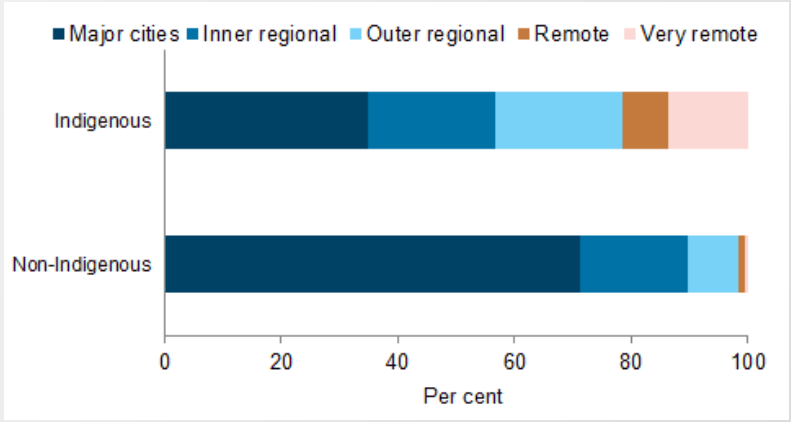


Average % total weight loss **after a Roux-en-Y gastric bypass**

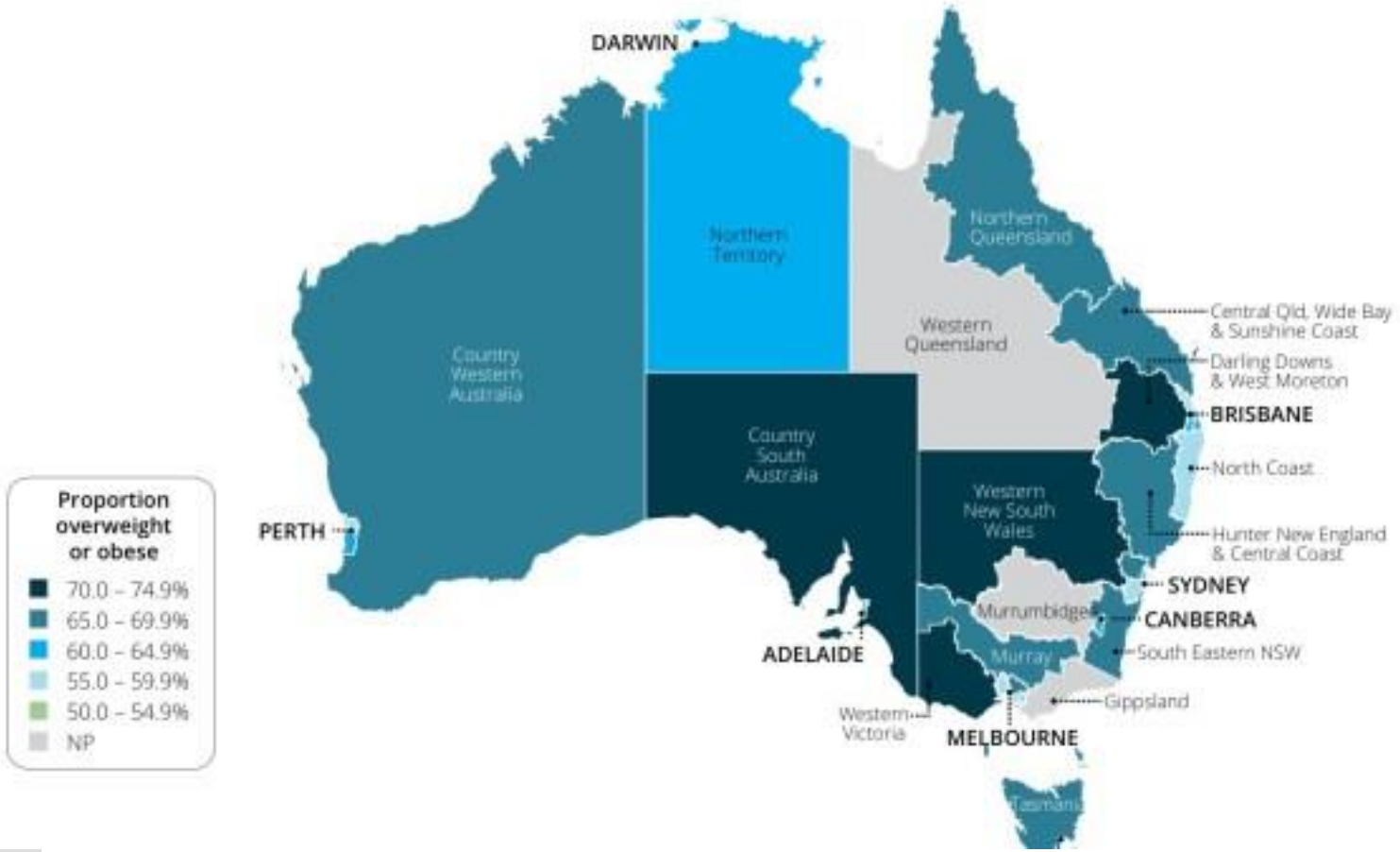


DISPROPORTIONATE EFFECTS

- Lower Socioeconomic Groups
- Indigenous Populations
- People with Lower Educational Attainment
- Rural and Remote Communities



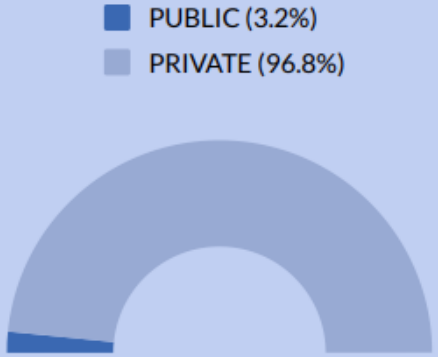
Prevalence by Primary Health Network area



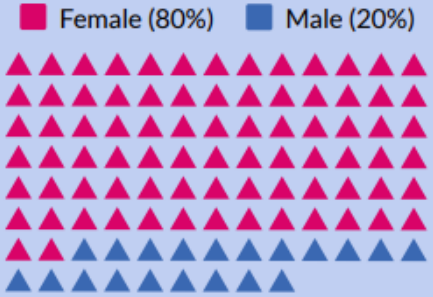
Primary bariatric surgery in Australia

1 January 2022- 31 December 2022

Funding of Primary Surgery



Who is having surgery?

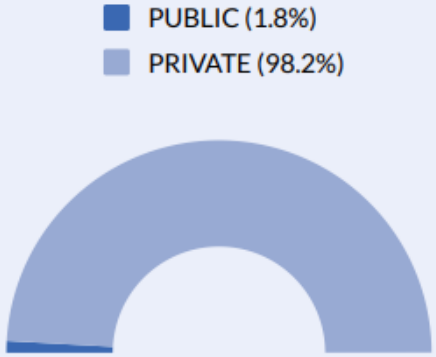


16,308 Primary Surgeries

Primary bariatric surgery in Aotearoa New Zealand

1 January 2022- 31 December 2022

Funding of Primary Surgery



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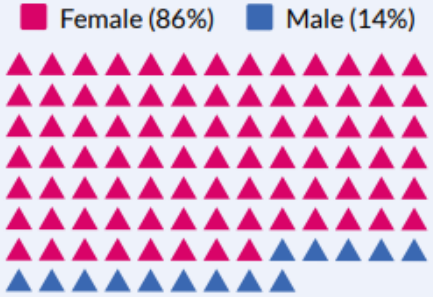
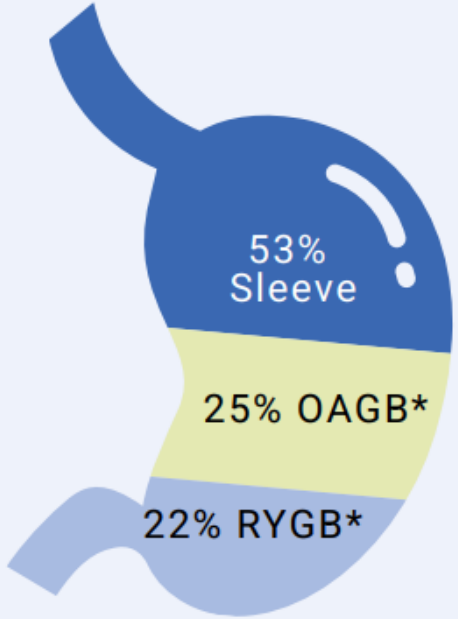


2,014 Primary Surgeries



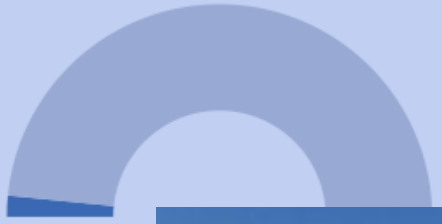
*OAGB=one anastomosis gastric bypass; *RYGB=Roux-en-Y gastric bypass

Primary bariatric surgery in Australia

1 January 2022- 31 December 2022

Funding of Primary Surgery

- PUBLIC (3.2%)
- PRIVATE (96.8%)



16,308
Primary Surgeries

Who is h

Female (

*OAGB=one ar

Primary bariatric surgery in Aotearoa New Zealand

1 January 2022- 31 December 2022

Funding of Primary Surgery

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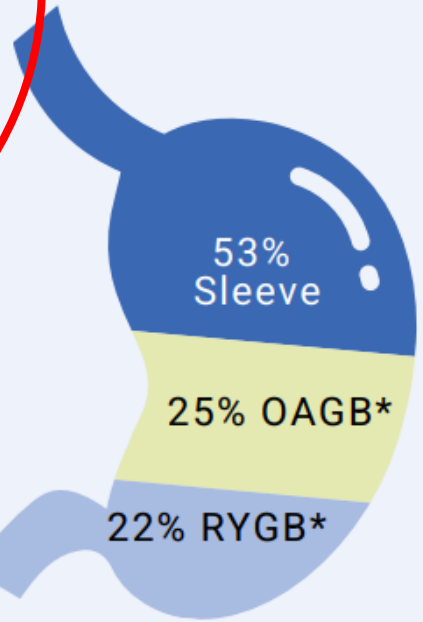
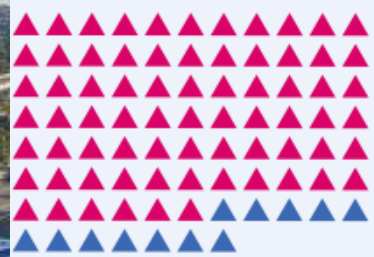
- PRIVATE (98.2%)

2,014
Primary Surgeries



o is having surgery?

Female (86%) Male (14%)



METHODOLOGY

- Retrospective review of the metabolic bariatric surgery outcomes in Indigenous Australians within a Statewide public bariatric surgery program.
- Patient demographics, perioperative, and short term (1 and 2-year) follow-up was reviewed.
- Inclusion criteria was all patients undergoing bariatric surgery in a single centre from 2018 to 2023. Both primary and revision procedures were included.

Table 1 – Patient demographics

	N	%
Total	122	100
Age (Mean, ±SD)	46.4 (±11.4)	
Sex		
Male	31	25.4
Female	91	74.6
Procedures		
Primary	103	84.4
Revisional	19	15.6
Procedure type		
LSG	50	41.0
RYGB	44	36.1
OAGB	26	21.3
LAGB	2	1.6
Added procedures		
One additional	6	4.9
Hiatus hernia repair	5	4.1
Removal of gastric band	1	0.8
Preoperative health		
Initial BMI (Mean, ±SD)	45.8 (±9.3)	
Baseline diabetes	78	63.9
Diabetes		
No medications	8	6.6
Requiring insulin only	2	1.6
Requiring oral hypoglycaemic agents only	47	38.5
Requiring both insulin and OHG	21	17.2
Other comorbidities		
Obstructive sleep apnoea	42	34.4
Hypertension	51	42.8

BMI, Body mass index; *LSG*, Laparoscopic sleeve gastrectomy; *RYGB*, Roux-en-y gastric bypass; *OAGB*, One anastomosis gastric bypass; *LAGB*, laparoscopic adjustable gastric banding; *OHG*, oral hypoglycaemic agent.

RESULTS

Table 2 – Perioperative outcomes

	N	%
Operative time in mins (Mean, ±SD)	94.89 (±31.7)	
30-day morbidity and mortality		
Grade II	**2**	**1.6**
Leak	1	
Small bowel obstruction	1	
Grade IIIa	**2**	**1.6**
Anastomotic ulceration	1	
Stricture	1	
Grade IIIb	**4**	**3.3**
Bleed	3	
Leak	1	
Grade IV	**0**	**0.0**
30-day mortality	0	0.0
Unplanned readmission within 30 days	8	6.6
Follow up		
Length of follow up in months (Mean, ±SD)	21.4 (±16.9)	
Loss to follow up	16	

Surgical complication outcomes were reported according to the Clavien-Dindo system of classification of surgical complications (11).

Table 3. Body mass index changes and length of follow up

	n	Mean	±SD
Weight (BMI)			
Pre-operatively	122	45.8	9.3
6 months	96	36.8	7.8
12 months	82	33.5	6.9
24 months	62	33.4	7.0
ΔBMI			
6 months		9.0	4.7
12 months		11.2	6.1
24 months		11.0	6.6

Weight loss outcomes were reported according to the standards outlined by the American Society for Metabolic and Bariatric Surgery (ASMBS) guidelines (12).

Table 4. Other weight loss outcomes

	Percent of total weight loss (%TWL) (mean, SD)	**Percent excess weight loss (%EWL)** (mean, SD)	**Percent excess BMI loss (%EBMIL)** (mean, SD)
6 months	19.3 (9.4)	45.2 (29.5)	45.6 (28.3)
12 months	24.5 (12.1)	57.1 (38.1)	57.6 (38.0)
24 months	25.3 (17.2)	60.4 (53.5)	55.1 (40.2)

Weight loss outcomes were reported according to the standards outlined by the American Society for Metabolic and Bariatric Surgery (ASMBS) guidelines (12).

Table 5 - Diabetes resolution outcomes

	N	% of those with diabetes
Diabetes		
Remission (complete or partial)	18	23.7
Improvement	35	46.1
Unchanged	23	30.3

Diabetes outcomes were reported according to the standards outlined by the American Society for Metabolic and Bariatric Surgery (ASMBS) guidelines (12) (cite). The above data reflects the diabetes status at most recent follow-up.

FIGURES

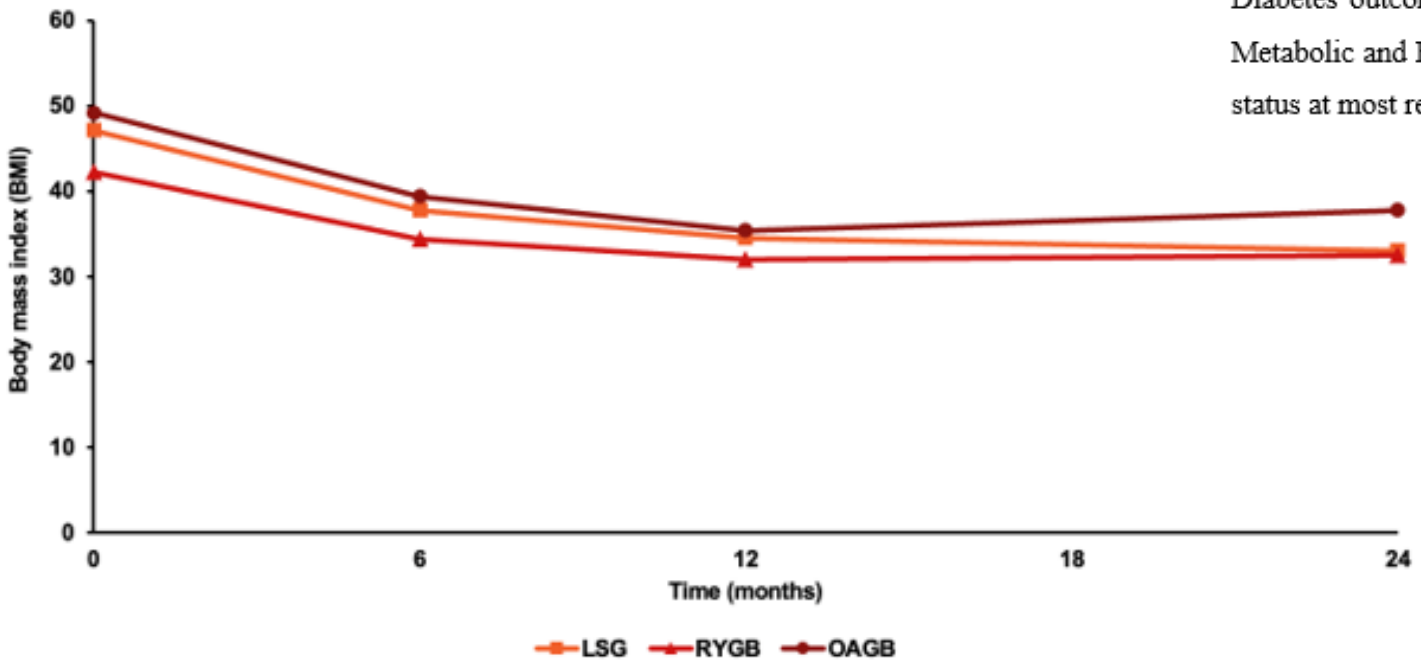


Figure 1. Body Mass Index (BMI) vs time of Aboriginal and Torres Strait Islander patients (n = 120) undergoing bariatric surgery at a single public hospital (2018-2023). Data represents mean BMIs as recorded at the relevant follow up date. *LSG,* laparoscopic sleeve gastrectomy; *RYGB,R*oux-en-Y gastric bypass; *OAGB,* one-anastomosis gastric bypass.

CONCLUSIONS

- Largest Australian retrospective case series (n=122) and evidence of contemporary bariatric surgery in a public setting,
- MBS in Indigenous Australians is safe and results in comparable weight loss and diabetes resolution outcomes to non-Indigenous Australians in a public hospital setting.
- These results support the ongoing engagement of Indigenous Australians with the Statewide Bariatric service in Queensland.