

# Public Bariatric Surgery

## A National Framework – Executive Summary Document

October 2020

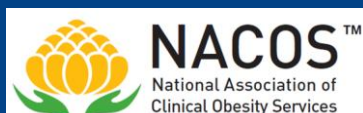
ANZMOSS & Collaborative Public Bariatric Surgery Taskforce



**ANZMOSS**

Australian & New Zealand  
Metabolic and Obesity Surgery Society

Collaborating organisations:



# Executive Summary

Obesity is a chronic progressive disease that leads to physical, psychological, and metabolic health problems. The prevalence of obesity is increasing across the globe and in 2017-18 Australia ranked fifth among OECD countries with over one third (31%) of Australian adults living with obesity (1 p. 1). Despite this increasing prevalence, access to the full suite of effective treatments is limited in Australia, including access to bariatric-metabolic surgery

Bariatric-metabolic surgery (also referred to as bariatric surgery) is a well-established, safe and effective form of obesity treatment with demonstrable meaningful and sustained weight loss over the medium to long term. Bariatric surgery has also been shown to be highly effective in reversing or improving obesity-related risks and complications in patients, especially for type 2 diabetes (2). Research evidence is consistent in supporting the cost-effectiveness of surgery in the treatment of obesity and its complication (3).

Although bariatric-metabolic surgery (bariatric surgery) is one of the most effective methods for treatment of obesity, there remain barriers to access especially in the public hospital setting and access remain inadequate.

Over 90% of all bariatric surgery is currently performed in the private system as access to the public hospital system remains poor, even for those with the greatest need (4 p. 5). In 2015-16 only 950 of approximately 24,000 bariatric surgeries performed in Australia occurred in public hospitals (5). A recent (2017) study suggested only 15 public hospitals from a potential 700 institutions nation-wide formally offered a bariatric-metabolic surgical programme (6). In 2019 the National Bariatric Registry recorded 22 public hospitals with bariatric cases but only 10 of these with significant (>75 per year) case load (7).

This inequity of access to care is concerning. With appropriate considerations, making bariatric surgery available within the public hospital setting can provide life-changing health and wellbeing benefits to those who need it most. Further, there is increasing recognition of bariatric surgery as an early treatment option in the care of diabetes (and other chronic diseases) in both international and emerging Australian-developed guidelines (8). This is becoming the new “standard of care” for such diseases. Australian public hospitals have the opportunity to meet this standard of care through increased provision of bariatric surgery.

The 2017 Public Bariatric Surgery ANZMOSS<sup>1</sup> Summit identified that a National Framework was required to provide clear guidelines to health policy makers, clinical governance boards and health practitioners to enable:

- facilitation of successful implementation of bariatric surgery more widely in Australia’s public hospital system
- standardisation of key care elements such as patient eligibility and prioritisation
- a reduction in variations in preoperative and postoperative care pathways
- development of a sustainable model of care integrated with multimodal treatment of obesity.

This National Framework is the result of expert consensus from the ANZMOSS and Collective Public Bariatric Surgery Taskforce (the Taskforce), involving and endorsed by key stakeholder organisations in the treatment of obesity and bariatric surgery (see Taskforce members and participating organisations in Appendix A). The National Framework has been designed to deliver:

- efficient patient centred care
- sustainable use of resources to cater to the disease burden of obesity in the community
- deliver surgical care to the most appropriate patient populations.

This Framework is complementary to the first National Framework for Clinical Obesity Services in Australia (9), developed by NACOS – a collaborative group of concerned health care professionals, which offers practical guidance on best design, delivery, and access to clinical obesity (or ‘weight management’) services in our health system. It is intended that as these frameworks go forward, surgical pathways of care as outlined in this framework and nationwide obesity services pathways and standards, as developed in the NACOS Framework, will be integrated further.

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<sup>1</sup> Australian New Zealand Metabolic and Obesity Surgery Society.

Currently, this National Framework does not include considerations for children and adolescents who may need bariatric services. Additional considerations and guidelines will be developed for paediatric and adolescent bariatric surgery at a later stage.

### Bariatric-metabolic surgery

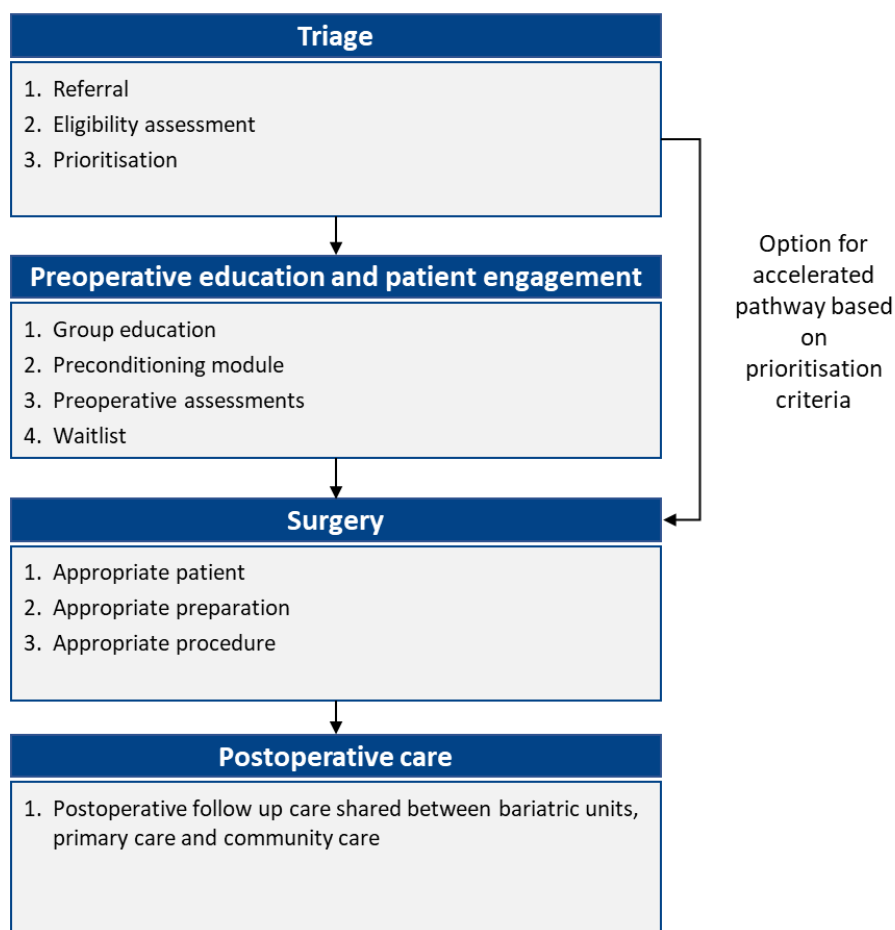
Bariatric-metabolic surgery (also referred to as bariatric surgery) is a well-established, safe and effective form of obesity treatment with, demonstrable meaningful and sustained weight loss over the medium to long term. Bariatric surgery has also been shown to be highly effective in reversing or improving obesity-related risks and complications in patients, especially for type 2 diabetes (2 p. 3).

There are a range of established bariatric procedures that vary in mechanism of action, outcomes, complications and side effects but each has demonstrated efficacy and may have application in different clinical circumstances. Research evidence is consistent in supporting the cost-effectiveness of surgery in the treatment of obesity and its complications. (3 p. 6).

### Proposed way forward

In this National Framework, the Taskforce is proposing a carefully considered bariatric surgery service model for the public hospital system to address this unmet clinical need. The service model includes several stages from triage to postoperative care. Working through each stage enables selection of eligible patients that are likely to benefit the most from bariatric surgery. Figure 1 outlines the proposed patient flow for bariatric surgery in the public hospital system.

Figure 1: Proposed patient flow through the public hospital system



## Triage (including eligibility and prioritisation)

Eligibility criteria determines whether a patient should or should not receive bariatric surgery in the public hospital system. The Taskforce recommended that eligibility criteria for bariatric surgery in the public hospital system is based on the Edmonton Obesity Scoring System (EOSS). The validated EOSS is a risk stratifying tool that sub-classifies populations living with obesity into five score groups that predict mortality more reliably than BMI alone (10 p. 7). The EOSS stages are summarised as:

- EOSS 0: no associated disease or impairment
- EOSS 1: preclinical disease
- EOSS 2: established disease
- EOSS 3: end organ disease
- EOSS 4: end stage disease.

Further detail on the EOSS is outlined in Section 2.

Using this tool, as well as stratifying by age and BMI, the Taskforce recommended eligibility criteria are summarised in Table 1. It should be noted that the following criteria has been developed cognisant of particular considerations within, and is specific for, the public hospital setting and does *not* seek to define eligibility for bariatric surgery more broadly.

Table 1: National Framework Eligibility Criteria Summary

Qualifying criteria	Contraindications
<p>If the patient in review is:</p> <ul style="list-style-type: none"> <li>• Aged 18-65, BMI &gt;35-40, EOSS 2-3</li> </ul> <p><b>AND</b></p> <ul style="list-style-type: none"> <li>• Documented previous weight loss attempts/treatments</li> <li>• Absence of contraindications (see next column)</li> </ul> <p style="text-align: center;"><b>OR</b></p> <ul style="list-style-type: none"> <li>• Aged 18-65 years, BMI&gt;40, EOSS 1-3</li> </ul> <p><b>AND</b></p> <ul style="list-style-type: none"> <li>• Documented previous weight loss attempts/treatments<sup>2</sup></li> <li>• Absence of contraindications (see next column)</li> </ul> <p style="text-align: center;"><b>OR</b></p> <ul style="list-style-type: none"> <li>• Aged 65-70, BMI &gt;40, EOSS 2-3</li> </ul> <p><b>AND</b></p> <ul style="list-style-type: none"> <li>• Documented previous weight loss attempts/treatments</li> <li>• Absence of contraindications (see next column)</li> </ul> <p style="text-align: center;"><b>Diabetes</b></p> <ul style="list-style-type: none"> <li>• BMI&gt;30 – 35 <b>AND</b> had T2DM for &lt;10 years or has favourable C – Peptide level <sup>3</sup> which is poorly controlled with medication</li> <li>• BMI &gt; 35 with established diabetes</li> </ul>	<p>If the patient in review has any one or more of the following contraindications, they will not be eligible for bariatric surgery:</p> <ul style="list-style-type: none"> <li>• Medical contraindications to surgery after risk assessment</li> <li>• Alcohol/illicit drug dependence</li> <li>• Untreated severe depression</li> <li>• Untreated DSM-5 eating disorders not managed by an appropriate healthcare professional(s)</li> <li>• Active psychosis.</li> </ul>

Smoking is associated with increased operative morbidity as well as longer term complications such as gastric ulceration. Active smokers should be supported to quit over the period leading up to surgery with a view to permanent cessation after the operation.

<sup>2</sup> By GP, dietitian, EP or other HCP

<sup>3</sup> Cost effectiveness typically increases if surgery is performed within five years of diagnosis of T2DM.

Prioritisation is sequential to eligibility. Prioritisation refers to the relative urgency of the bariatric surgery that should take place. Priority for assessment and surgery should be given to patients with significant chronic diseases that are currently not well treated but which are known to respond well to weight loss (11 p. 8). These conditions include:

- diabetes mellitus type 2 (12 p. 10)
- idiopathic intracranial hypertension (13)
- polycystic ovary syndrome and/or obesity related primary infertility (14 p. 11)
- non-alcoholic steatohepatitis
- obstructive sleep apnoea and/or obesity hypoventilation syndrome
- obesity-related cardiomyopathy (15).

With these considerations, further details on the prioritisation criteria for urgent assessment and surgery are outlined in Section 2. Prioritisation will determine whether a cohort of eligible patients should have their pathway to surgery expedited as seen in Figure 1.

## Preoperative education and patient engagement

After eligibility and prioritisation criteria have been met, patient education should occur before waiting list assessment. The purpose of patient education is two-fold. Firstly, it allows for the patient to decide if they will proceed with the process and secondly it aims to prepare patients for the process ahead. Education should include information about pre-, peri – and post-operative processes and issues that patients need to consider.

An outline of surgical options noting outcomes, risks and side effects should be provided. Dietary and longer-term eating-habit and lifestyle adjustments required ongoing for optimal outcome should be outlined as well as reasonable (average) realistic long-term outcome expectations post-surgery. It is important to incorporate education around fertility, pregnancy and appropriate contraception in female patients of reproductive age. The format in which the education is provided should be decided by the local bariatric surgical service. It could include group education, a patient-conducted or physician-led preconditioning education program and/or personalised education, which could be conducted prior to further clinical assessment. It is recommended that a two-step education and engagement process be offered to allow adequate time for patients to consider if they wish to proceed with surgery.

After the pre-operative education, the Taskforce recommends that patients are assessed from a medical, surgical, nutritional and psychosocial perspective to guide patient management. If at any pre-operative stage the patient decides not, or is deemed unsuitable, to proceed with bariatric surgery, it is essential that alternative care and treatment of obesity is supported by either referral or provision of information to the patient (and referring clinician) for management of obesity via non-surgical means.

## Surgery

Broadly, the following procedures are well established and recognised bariatric-metabolic surgery options suitable for a public hospital service:

1. mechanical, including adjustable gastric banding (LAGB) (16 p. 45)
2. combined mechanical and metabolic, including sleeve gastrectomy (SG), *Roux-en-Y* gastric bypass (RYGB), mini gastric bypass - one anastomosis bypass (MGB - OAGB).
3. combined mechanical, metabolic and malabsorptive, including biliopancreatic diversion (BPD) and duodenal switch (DS).

Several technical variations of these procedures exist and may be appropriate in particular circumstances or trial / research settings. It is likely that with time, these and other procedures may develop or evolve.

Bariatric surgical services should determine the range of procedures to be offered in their program according to expertise and facilities available. Patients should be educated on all available procedures and where a procedure is not offered by the service but deemed more appropriate for the individual after clinical assessment, referral to a linked or networked service providing the procedure is appropriate.

Surgery should be performed by appropriately trained surgeons who are hospital accredited for bariatric surgery.

## Postoperative care

Postoperative care is critical to ensure patient outcomes are maintained and further improved post-bariatric surgery. The Taskforce recommends that surgical services develop standardised perioperative and postoperative care pathways based on local expertise, approaches and resources to limit variation in care and provide a template for treating teams of “expected course of patients” (17 p. 12).

The National Framework recommends that at a minimum, the following postoperative follow up points are adopted, noting that the recommended time frames may vary by procedure, institutional experience and available resources:

1. postoperative recovery check (e.g. 2 weeks)
2. early dietitian review (e.g. 2 to 8 weeks)
3. clinical review (e.g. 3 and 6 months, then 6 monthly to two years)
4. dietetic review (e.g. 3 to 6 months, and annual review thereafter).

In addition to monitoring of weight, clinical review should incorporate review, monitoring and management of obesity related complications (such as diabetes, sleep apnoea etc.), medication adjustment, compliance with prescribed nutritional supplements and appropriate psychological support where required. Additionally, advice, education and provision of access to exercise programs should be facilitated. Metabolic and nutritional blood screening at least annually to monitor physiological health and nutritional safety should be conducted, more often if clinically indicated.

Follow up care may be delivered in three acceptable models of care:

1. primarily by the surgical service with appropriate input/referral to or collaboration with required medical specialists (e.g. diabetologists, bariatricians)
2. primarily by an allied medical service of bariatricians with appropriate liaison/referral back to surgical service
3. a combined “Metabolic Clinic” with both surgical and medical specialist expertise in the management of obesity. This is an ideal clinic model where expertise and appropriate resources exist.

Regardless of the clinic model adopted, the National Framework encourages incorporation of holistic care in liaison with the patients’ primary care providers.

As with other chronic disease shared care models, there needs to be provision for adequately upskilled and supported primary care teams to manage patients, with clear pathways to re-refer patients back to the bariatric unit in a timely manner when clinical “red flags” become apparent. Pathways of “shared care” are to be sought. This is the ideal model for patient-centred care as well as maximising efficient use of public hospital resources.

## Revisional surgery

Revisional surgery refers to surgical interventions for patients who have had a previous bariatric procedure. There are several reasons revisional surgery may be required, including the resulting symptoms, side effects and complications of primary surgery and/or amelioration of effect or poor response.

Whilst rates of revisional surgery can vary, the chronic nature of obesity means that some patients will inevitably require revisional surgery. Accordingly, public hospital services offering bariatric surgery must plan for and accommodate a modest rate of revisional surgery which must be balanced against the need for providing adequate opportunity for untreated patients accessing primary surgery. Bariatric surgical services must ensure the indications for revisional surgery are well defined and documented to limit the possibility for unnecessary surgery.

## Service model

With the National Framework’s proposed end-to-end bariatric surgery service explained above, it is critical to consider how this can be delivered effectively and efficiently in the public hospital setting. Several factors will contribute to a successful service model, including:

- **multidisciplinary team (MDT) composition:** the role of the MDT is to ensure patients receive adequate preparation, education and support, both before, during and after the surgery. MDT members must have the necessary qualifications and skills to adequately address the patient’s health care needs
- **referral sources:** public hospital services should be open to community referrals from GPs and other specialists

- **care pathways:** care pathways should be developed based on local context. This will allow for uniformity of care and early detection of variance that may indicate a perioperative problem for bariatric surgery patients
- **health care networking and surgical capacity:** relying on high level tertiary or quaternary institutions to deliver complete bariatric surgical services<sup>4</sup> is likely to be inefficient to meet the burden of disease both in metropolitan areas and in regional areas where incidence of obesity is often greater. It is vital that community hospitals and regional areas are well serviced by local or regional services. Where smaller institutions may appropriately offer lesser acuity services, formal linkages and network relationships should be formed between institutions to offer a complete bariatric surgical service
- **facilities and equipment:** institutions offering bariatric surgical care should have the minimum equipment requirements to support patients, such as wide chairs, scales that weigh above 250 kilograms, appropriately weight-rated ward theatre tables, beds and examination couches, blood pressure cuffs and other equipment.

Hospitals offering a bariatric-metabolic surgery service should educate the wider hospital staff base to ensure patients are treated with respect and without prejudice or stigmatisation which unfortunately is a common experience in the wider community for people with obesity.

This National Framework sets out the details on how the suggested patient flow and service model could work in the public hospital setting in Australia to address this unmet clinical need to treat obesity.

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<sup>4</sup> Complete bariatric surgical service refers to the delivery of the full suite of surgical management options including all primary operations, revisional surgery (only for patients who experienced complications with the primary bariatric surgery) and the management of complex complications.

# List of ANZMOSS and Collective Public Bariatric Surgery Taskforce recommendations

Table 2: List of ANZMOSS and Collective Public Bariatric Surgery Taskforce recommendations

Recommendation	Recommendation detail
<b>Eligibility and prioritisation</b>	
<b>Recommendation 1</b>	The first element of eligibility criteria for accessing bariatric surgery in the Public Hospital System is determined according to: <ul style="list-style-type: none"> <li>• BMI 35-40 EOSS 2-3</li> <li>• BMI &gt;40 with EOSS 1-3</li> <li>• exclusion of patients with EOSS 0 regardless of BMI<sup>5</sup></li> <li>• exclusion of patients with EOSS 4<sup>6</sup> regardless of BMI with exception of candidates for renal or liver transplant</li> </ul>
<b>Recommendation 2</b>	That the following patients by age cohort are considered eligible for bariatric surgery in the public hospital system: <ul style="list-style-type: none"> <li>• aged 18 – 64 be considered eligible</li> <li>• aged 65 – 70 with significant co-morbid disease and functional impairment (EOSS 2-3) and BMI &gt;40</li> </ul>
<b>Recommendation 3</b>	Eligibility criteria for patients seeking bariatric surgery in the public health system requires documented previous attempts at non-surgical therapies without sustained weight loss.
<b>Recommendation 4</b>	That contraindications to bariatric surgery include the traditional contraindications. Active smoking should be ceased prior to surgery and lifelong abstinence should be support post-operatively. All contraindications are listed in Table 1.
<b>Preoperative pathways</b>	
<b>Recommendation 5</b>	All eligible patients to go through preoperative education including group education, a preconditioning education and engagement program and personalised education prior to preoperative assessment.
<b>Recommendation 6</b>	Patients that progress through the group education, preconditioning program and personalised education should be comprehensively assessed from a medical, surgical, nutritional, psychological and social point of view. These assessments guide management and are educative opportunities for the patient.
<b>Surgery</b>	

<sup>5</sup> It is recognised that as a BMI >40 is approached, it is likely that a patient will have some form of functional impairment and is likely to fall into EOSS score 1 or greater.

<sup>6</sup> EOSS 4 patients will require assessment by an MDT team to determine whether the end stage disease is palliative prior to exclusion from surgery.



<b>Recommendation 7</b>	Institutions are encouraged to develop expert and consistent theatre teams to conduct bariatric surgery and appropriate patient care.
<b>Postoperative care</b>	
<b>Recommendation 8</b>	Surgical services develop standardised postoperative care pathways that consider the procedure undertaken, the probability of complications, patient progress and others involved in postoperative care to provide a template for treating teams.
<b>Revisional surgery</b>	
<b>Recommendation 9</b>	<p>Public hospital services offering revisional bariatric surgery should be guided by the following principles:</p> <ul style="list-style-type: none"> <li>• the indication for and desired outcome of revision should be clearly elucidated and documented</li> <li>• the proposed outcome should be realistically achievable</li> <li>• institutional or legacy patients should have equal access potential to revisional surgery without positive or negative prejudice and be subject to the same eligibility and prioritisation criteria</li> <li>• priority should be allocated by indication, as below in descending order: <ul style="list-style-type: none"> <li>– severe side effects and/or complications not adequately managed by other means</li> <li>– metabolic issues including recurrence or insufficient amelioration of disease complications<sup>7</sup></li> <li>– weight regain or poor weight loss response to primary operation<sup>8</sup></li> </ul> </li> <li>• all patients being considered for revision for control of clinically severe obesity with complications or for further weight loss indications should be discussed in an MDT meeting with both appropriate medical and surgical expertise available and consensus treatment approach adopted</li> <li>• where the indication is for poor weight loss response or weight regain, revisional surgery should only be considered after additional interventions are trialed. Appropriate dietetic, psychological and lifestyle counselling and intervention should be maximised and further surgery only considered if such measures are ineffective. The use of medical/pharmacological adjunctive therapy should also be considered unless contraindicated.</li> </ul>
<b>Service model</b>	
<b>Recommendation 10</b>	<p>To effectively and efficiently deliver bariatric surgery services in the public hospital setting, patients should be managed by a MDT which includes the following team member categories:</p> <ul style="list-style-type: none"> <li>• “Essential” team members who are embedded within the team and are involved in the care of every patient</li> <li>• “Desirable” team members comprising speciality areas where it is ideal that an individual or core group of specialists are nominated for dedicated involvement with the bariatric team and care of the bariatric patient. However, where this is not possible due</li> </ul>

<sup>7</sup> This requires clinical evaluation and is considered on an individual case-by-case basis

<sup>8</sup> There is no consensus to define this. However, weight loss that falls within parameters of expected predicted average weight loss curves are not indicated for surgery.

	<p>to institutional logistics, it is acceptable that the bariatric surgical service be supported by appropriately trained staff as part of the general roster of service</p> <ul style="list-style-type: none"> <li>• “Liaison” team members, which refers to services that are important for complete care but who are reasonably accessed on an as-needed basis in a formal or semiformal arrangement. Each of the speciality services in this category should ideally be available within the institution but at a minimum be accessible through networked services, for instance through a patient’s GP.</li> </ul>
<b>Recommendation 11</b>	<p>Public bariatric surgical services should be resourced to accept both internal and community referrals. Referrals for either medical, surgical or non-specified obesity care should be triaged, assessed, and then appropriately streamed after eligibility is determined. Referral triage and assessment should be performed as follows:</p> <ul style="list-style-type: none"> <li>• centrally by a single co-ordinator for medical, surgical and non-specified obesity care</li> <li>• when centrally is not practical, non-centrally by coordinators of closely networked parallel services, for example one surgical triage coordinator and one non-surgical triage coordinator</li> <li>• hospitals offering a public bariatric surgical program should establish relationships with regional unserved areas to provide access.</li> </ul>
<b>Recommendation 12</b>	<p>Localised care pathways should be developed by the surgical team in conjunction with liaison anaesthetics and perioperative care physicians. Medical, nursing and primary care staff should be appropriately trained and familiarised with these care pathways through regular in-servicing and upskilling.</p>
<b>Recommendation 13</b>	<p>Public bariatric services should be guided by the following health care networking principles for service delivery:</p> <ul style="list-style-type: none"> <li>• institutions and services are formally networked by agreement to provide for a “complete capability” service between them</li> <li>• networked services deliver streamlined care though standardised processes recommended in this National Framework including preoperative assessment, preparation and postoperative care such that patients assessed at any service within the network and cross referred need not undergo reassessment</li> <li>• parameters of “informed consent” processes are standardised between institutions such that patients receive information on all suitable options, including those not offered by the individual institution, and be appropriately referred on as a priority if required. This requires standardised agreements and educational materials between services</li> <li>• streamlining access to specialised services between institutions if required – e.g. interventional radiology</li> <li>• networked institutions meet at least twice annually to audit and optimise service delivery.</li> </ul>

<p><b>Recommendation 14</b></p>	<p>All institutions offering bariatric surgery comply with the following minimum facility and equipment requirements at any institution providing bariatric surgical care:</p> <ul style="list-style-type: none"> <li>• wide (armless) chairs that safely accommodate larger patients</li> <li>• ward beds and examination couches weight-rated appropriately</li> <li>• scales that weigh above 250 kilograms and have a wide base</li> <li>• toilets that are not wall suspended and have rails capable of supporting weight above 250 kilograms</li> <li>• operating tables with higher weightings and the ability to be extended to accommodate lateral spread</li> <li>• appropriate surgical instruments (e.g. long-length surgical instruments)</li> <li>• advanced radiology resources including 24-hour interventional radiology services</li> <li>• x-ray and CT equipment that can cope with patients who weigh over 250 kilograms<sup>9</sup></li> <li>• appropriate equipment for patient transfer</li> <li>• HDU, extended recovery or monitored beds</li> <li>• emergency (out of hours) theatre access</li> <li>• large cuff sphygmomanometers</li> <li>• suitably sized hospital gowns</li> <li>• endoscopy.</li> </ul>
<p><b>Data collection</b></p>	
<p><b>Recommendation 15</b></p>	<p>Collection of at least a minimum unified dataset that outlines which data should be collected for bariatric surgery patients, with the expanded unified dataset as an option to collect more complete data. All public bariatric surgical services must:</p> <ul style="list-style-type: none"> <li>• contribute to the National Bariatric Surgery Registry (BSR)</li> <li>• maintain a database allowing minimum outcome dataset reports</li> <li>• ideally be able to provide data pertaining to waiting times and process.</li> </ul>

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<sup>9</sup> If having equipment of this capacity is unsuitable for a particular institution, patients can be referred to another facility in its network with appropriate weight capacity.



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