Obese Obstetric Woman - Management in South Australia 2019 Clinical Directive

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1. Policy Statement

The Obese Obstetric Woman - Management in SA 2019 Clinical Directive will guide SA Health employees in their role in managing the pregnant woman who records a BMI > 35kg/m² at any time during her pregnancy.

It upholds the SA Health Strategic Plan 2017 - 2020 themes of Lead, Partner and Deliver¹ through the use of evidence, translating research into practice and involving consumers in its development, and ensuring safe and effective care of the obese pregnant woman.

This clinical directive has been developed to assist perinatal care providers and health policy makers in the appropriate management of the obese pregnant woman and should be used in conjunction with the Standards for Maternal & Neonatal Services in South Australia² and the South Australian Perinatal Practice Guidelines³

2. Roles and Responsibility

Executive Officer

The Executive Officer of the hospital providing birthing services has the responsibility to ensure all care required by the obese pregnant woman, over the entire perinatal period can be safely provided over any 24 hour period with:

- appropriately credentialed workforce available in accordance with the Standards for Maternal & Neonatal Services in South Australia¹
- relevant necessary facilities and infrastructure within their hospitals are established in accordance with relevant professional standards and the Standards for Maternal & Neonatal Services in South Australia¹

The Executive Officer of the hospital providing Level 6 birthing services must ensure perinatal health practitioners are aware of this clinical directive and the subsequent impact on their clinical practices in managing the full range of obese pregnant woman up to and including the woman >170kg and /or BMI >60kg/m².

Hospital Managers

Hospital managers providing birthing services will ensure the perinatal health practitioners in their employment have an understanding of The Obese Obstetric Woman Management in SA 2019 Clinical Directive and the subsequent impact on their clinical practices in managing the obese pregnant woman.

Hospital managers will ensure there is:

- provide a detailed operating procedure for perinatal health practitioners working in maternity services; determining the process of transferring the obese pregnant woman requiring more complex care to a suitable birthing site able to accommodate her care requirements
- a plan for those women who will be required to relocate to a public hospital birthing unit for more complex perinatal care
information made available to the consumers and the community outlining the hospital’s limitations in managing the obese pregnant woman. The Patient Information Brochure Obese Obstetric Woman Management in SA 2019 could be used in this situation.

Hospital managers of the hospital providing Level 6 birthing services must provide detailed operating procedures for the local management of the obese pregnant woman, regardless of their BMI or body weight and complications including the preparedness to accept the transfer of those requiring complex care.

**SA Health perinatal health practitioners employed in perinatal or related services**

SA Health perinatal health practitioners employed in birthing services must;

- comply with the Standards for Maternal & Neonatal Services in South Australia
- adhere to the local protocols guiding staff in the referral of women with a BMI outside their scope of care and/or requiring more complex care to more qualified perinatal staff for advice and, when required, to facilities able to provide more advanced care.
- oblige local protocol outlining their role and responsibilities and nominated referral pathways in the management of the obese obstetric woman, including the plan to relocate the obese pregnancy woman to a public hospital birthing unit when appropriate and/or more complex perinatal care is required.

### 3. Background

The service delineation described within this clinical directive provides a framework assisting health services to structure their perinatal services to appropriately meet the needs of the obese obstetric woman within the local community, whilst taking account of the local perinatal services available and those that can be better provided elsewhere.

Although this document has primarily been produced for application within the South Australian public health sector, it is acknowledged that the standards of practice outlined are also relevant to private health services and may subsequently be used as a reference for private maternity services.

The World Health Organisation (WHO) has identified the ‘epidemic of obesity’ as one of today’s most significant world-wide health problems. Obesity now affects three times more adults than it did 20 years ago.

It is acknowledged that maternal overweight and obesity are strongly associated with an increased risk of both maternal and infant mortality and morbidity.

Further to this, it is recognised that there is a strong association with an increasing maternal BMI and an increased risk for almost every pregnancy related complication.
Obese Obstetric Woman - Management in South Australia 2019
Clinical Directive

Obesity is a significant health issue for women during pregnancy and childbirth. South Australian 2016 data indicates that 27.8% are overweight on entering pregnancy, with a further 24.2% women classified as obese.

The obese obstetric woman presents specific challenges, resultant from the potential for adverse health outcomes for the pregnant woman and her baby and the potential risk factors for perinatal health care providers, such as lack of space, equipment for safe care, treatment and transportation.

**Labour and Birth**

Women who are overweight or obese during pregnancy have an increased incidence of the presence of other co-morbidities, including, but not limited to, hypertension, diabetes, thrombo-embolism, and other medical conditions which can impact significantly on the administration of general and regional anaesthesia techniques.

Women who are obese are more likely to develop medical complications necessitating induction of labour. Obese women are at increased risk of haemorrhage during pregnancy and after a caesarean section, and in the post-partum period are at a greater risk of wound infection and thrombo-embolic disease.

As per routine perinatal management; where there is no medical or obstetric indication for early birth, the spontaneous onset of labour should be anticipated and the obese women should be encouraged to birth vaginally.

Infants of women who are overweight or obese are at increased risk of macrosomia and the associated complications of traumatic birth, shoulder dystocia and post-partum haemorrhage.

To ensure prompt response to potential complications, pregnant women with a BMI $\geq 40 \text{kg/m}^2$ warrant a comprehensive clinical assessment by a Specialist Obstetrician and senior midwifery and anaesthetic staff present for birth.

Although technically, both external fetal monitoring and the application of a fetal scalp electrode may be difficult in women who are obese, fetal heart rate monitoring should be undertaken during labour.

To reduce the risk of thrombo-embolic disease prolonged periods of immobility should be minimised where possible. Thromboprophylaxis, including adequate calf stimulation and anticoagulation, should be considered for prolonged periods of immobility during labour, vaginal birth and during caesarean section.

Care of an obese woman in the intrapartum period requires attention to potential occupational health safety and welfare hazards. Additional obstetric, midwifery anaesthetic, and theatre staff may be required to provide the appropriate care.

It is the responsibility of the hospital managers to ensure appropriate protocols are available indicating the number of staff that should be made available to care for an obese woman in the perinatal period.
**Anaesthetic management**

The physiological changes of pregnancy are significant enough to have major implications on the provision of anaesthesia. In obese women these effects can be compounded and the anaesthetist may have to manage a woman with seriously limited physiological reserve\(^2\).

Pregnant women with a BMI \( \geq 40 \text{ kg/m}^2 \) warrant a comprehensive clinical assessment by a Specialist Anaesthetist. The Specialist Anaesthetist assessment should be undertaken in accordance with the professional standards of the Australian and New Zealand College of Anaesthetists. Using Appendix 1 “Proforma to Assist the Anaesthetic Assessment of the Pregnant Woman with Increased BMI” which provides a guide for the Specialist Anaesthetic assessment. As per Appendix 2 “Flow Chart: Process to secure Anaesthetic Assessment with Specialist Anaesthetist for the Obese Obstetric Women in South Australia”.

From a respiratory perspective, minute volume and oxygen demand increases. Pregnancy may lead to improvement in some respiratory function parameters in obese women, eg functional residual capacity usually improves. However, compared with non-obese women, a caesarean section is more likely to reduce lung volume and capacities in obese women\(^13\).

The increases in heart rate, cardiac output, mean arterial pressure and supine hypotension associated with pregnancy are greater in women who are obese. Obstructive sleep apnoea is not uncommon in obese women but pregnancy does have some protective effects on this condition. Pulmonary hypertension may be present in these patients. This is associated with a risk of right ventricular failure\(^13\).

The presence of a hiatus hernia is common amongst obese patients, and along with gastro-oesophageal reflux that is also frequently reported in pregnancy and in conjunction with the delay in gastric emptying resultant from labour. The obese pregnant woman may have an increased risk of aspiration\(^13\).

Obesity considerably increases the technical challenges in providing safe and effective anaesthesia and analgesia care. The obese pregnant woman is more likely to experience a failed intubation than a non-obese woman\(^13\). Positioning of the obese patient on the operating table requires significant skill and additional staff.

Ultrasound may be required to assist with venous access. Regional anaesthesia can be challenging due to difficulty with landmarks and the need for ultrasound guidance to improve the success of regional anaesthesia may limit its use in some health care settings where specialist care is not available\(^13\).

The MBRRACE-UK - Report - Saving Lives, Improving Mothers’ Care 2017 indicates pregnant women with a BMI \( \geq 40\text{kg/m}^2 \) should have an antenatal consultation with a Specialist anaesthetist, so that potential difficulties with venous access, regional or general anaesthesia can be identified and an anaesthetic management plan for labour and delivery discussed and documented in the woman’s medical record\(^14\).
Emphasises is placed on the importance of involving skilled clinicians with expertise in anaesthesia/critical care early; and the risks associated with an ageing and more obese obstetric population. It is advocated that additional skills training in specialist areas such as resuscitation, anaesthesia and the management of pre-existing medical conditions may help avert maternal deaths. This report highlights the need for the involvement of Registered Specialist Consultant Anaesthetists in the management of obese pregnant patients requiring anaesthesia.

Those pregnant women with a BMI $\geq 45$ kgm$^{-2}$ should have their care transferred to a Level 5 or 6 maternity unit where Specialist Anaesthetist consultation is available for their ongoing management.

**Post-partum care**

Women who are obese have a recognised increase in their risk of airway compromise and obstructive sleep apnoea. This places the woman at increased risk of aspiration, particularly following the administration of narcotic and sedative medications. In this setting, more frequent observation periods are appropriate.

Women who are obese during pregnancy are at increased risk of thrombo-embolic disease. As with any part of the perinatal period, prolonged periods of immobility should be minimised where possible. Women who are obese during pregnancy have an increased risk of caesarean birth and in the post-partum period subsequent, wound infection. Regular wound care (both abdominal and perineal) should be provided. There is no evidence to inform the post-partum use of prophylactic antibiotics in this group of women.

Prolonged periods of immobility should be minimised where possible. Immobility during the post-partum period requires attention to pressure area care. Mobilisation should be encouraged with regular physiotherapy to help prevent these types of complications.

Women who are obese are less likely to initiate and maintain breast feeding of their infant. Women should receive appropriate encouragement and assistance to establish breast feeding. Prior to discharge from hospital, women should receive appropriate information and advice about contraception. Where hormonal methods of contraception are considered (particularly estrogenic compounds), a risk assessment for thrombo-embolism should also be undertaken.

Women should be directed to secure a six-week post-partum assessment, with their General Practitioner.
4. Policy Requirements

Principles

In support of optimal care of the pregnant woman in South Australia the clinical directive provides direction on the level of care and management of pregnant woman who records a BMI > 35kg/m$^2$. Additional direction is provided for the care of those pregnant women:

- with a BMI of $\geq 40$ kg/m$^2$ with a requirement they have a management plan developed in consultation with a Specialist Obstetrician and Specialist Anaesthetist to guide the assessment of pregnancy risk and to determine the presence of co-morbidities.

- with a BMI $\geq 45$ kg/m$^2$ should be instructed by her 34 week gestation that she will be required to relocate, no later than the completion of her 36 weeks gestation, to a location closer to a maternity hospital Level 4, 5 or 6, where it is planned for her to birth.

- with a BMI of $\geq 60$kg/m$^2$ or weighs $\geq 170$kg should have her care managed by a Specialist Obstetrician in collaboration with a Specialist Anaesthetist at a Level 6 public maternity hospital with an onsite adult intensive care unit for ongoing management of her perinatal care.
Table 4: Best Practice for the Management of the Obese Obstetric Woman

<table>
<thead>
<tr>
<th>BEST PRACTICE</th>
<th>LEVEL OF EVIDENCE</th>
<th>EXPLANATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Women with a booking BMI of ≥30kg/m² should be encouraged to limit their weight gain in pregnancy to 5 – 9kg or less.</td>
<td>Level 3-2 and 3-3</td>
<td>Good practice point (✓)</td>
</tr>
<tr>
<td>Pregnant women with a BMI of ≥30kg/m² and has identified co-morbidities and risk factors and when her care has been escalated to more specialist care should be directed, no later than the completion of her 36 weeks gestation to relocate to a residence of their choice within the 150kms radius of the hospital she is schedule to birth at.</td>
<td>Level 3-2 and 3-3</td>
<td></td>
</tr>
<tr>
<td>Women with a BMI 35 -39.9kg/m² at the antenatal booking visit or at any time during the antenatal period can usually remain in the care of a Registered medical practitioner(s) with credentials as a specialist GP obstetrician or GP obstetric proceduralist who has formal arrangements to undertake the South Australian GP Obstetric Shared-Care Program or Registered Midwife and plan to birth in a maternity unit with a designated birth hospital Level 3, 4, 5 or 6. Upon presentation of complications or co-morbidities this care should be managed in consultation with a Specialist Obstetrician and in accordance with the Australian College Midwives Inc; National Midwifery Guidelines for Consultation and Referral - 3rd Edition Issue 2 (2014)(^{15}).</td>
<td>Level 3-2 and 3-3</td>
<td>Good practice point (✓)</td>
</tr>
</tbody>
</table>
### Table 4: Best Practice for the Management of the Obese Obstetric Woman (continued)

<table>
<thead>
<tr>
<th>BEST PRACTICE</th>
<th>LEVEL OF EVIDENCE</th>
<th>EXPLANATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>**Women with a BMI of ≥40 -&lt; 45kg/m² at the antenatal booking visit or at any time during the antenatal period should have their care provided by a Registered medical practitioner(s) with credentials as a specialist GP obstetrician or GP obstetric proceduralist who has formal arrangements to undertake the South Australian GP Obstetric Shared-Care Program in consultation with Specialist Obstetrician and Specialist Anaesthetist and should be booked to birth in a public hospital maternity unit Level 4, 5 or 6 using Appendix 1 “Proforma to Assist the Anaesthetic Assessment of the Pregnant Woman with Increased BMI” which provides a guide for the Specialist Anaesthetic assessment. As per Appendix 2 “Flow Chart: Process to secure Anaesthetic Assessment with Specialist Anaesthetist for the Obese Obstetric Women in South Australia”.”</td>
<td>Level 3-2 and 3-3</td>
<td>Good practice point (√)</td>
</tr>
<tr>
<td>**Women with a BMI of ≥45kg/m² but &lt; 59.9kg/m² at the antenatal booking visit or at any time during the antenatal period should be referred to a Specialist Obstetrician to manage their care in consultation with a Specialist Anaesthetist and should be booked to birth in a public hospital maternity unit Level 5 or 6. It may be useful to utilise Appendix 1 “Proforma to Assist the Anaesthetic Assessment of the Pregnant Woman with Increased BMI” which provides a guide for the Specialist Anaesthetic assessment. As per Appendix 2 “Flow Chart: Process to secure Anaesthetic Assessment with Specialist Anaesthetist for the Obese Obstetric Women in South Australia”.”</td>
<td>Level 3-2 and 3-3</td>
<td>Good practice point (√)</td>
</tr>
</tbody>
</table>
Table 4: Best Practice for the Management of the Obese Obstetric Woman (continued)

<table>
<thead>
<tr>
<th>BEST PRACTICE</th>
<th>LEVEL OF EVIDENCE</th>
<th>EXPLANATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Women with a BMI of ≥60kg/m² or weighs ≥170kg at the antenatal booking visit or at any time during the antenatal period should be referred to a Specialist Obstetrician manage their care in consultation with a Specialist Anaesthetist and should be booked to birth in a public hospital maternity unit Level 5 or 6 - with adult intensive care facilities.</td>
<td>Level 3-2 and 3-3</td>
<td>Good practice point (√)</td>
</tr>
<tr>
<td>All Level 3,4,5,6 maternity unit should have appropriate equipment to enable accurate patient assessment i.e. bariatric weighing scales and appropriate sized BP cuff etc.</td>
<td>Level 3-2 and 3-3</td>
<td>Good practice point (√)</td>
</tr>
<tr>
<td>Women with a BMI ≥ 45kg/m² when admitted to the birth suite, should have adequate intravenous access with an appropriately large bore cannula (16g or larger).</td>
<td>Level 3-2 and 3-3</td>
<td>Good practice point (√)</td>
</tr>
<tr>
<td>Women with a BMI ≥45kg/m² will require appropriately experienced obstetric, midwifery and anaesthetic staff available for her care.</td>
<td>Level 3-2 and 3-3</td>
<td>Good practice point (√)</td>
</tr>
</tbody>
</table>

**Note:** Levels of evidence as per NMRHC guidelines⁶

**Facilities implications**

The bariatric facilities and equipment for the provision of maternity services for the obese obstetric women and their babies should be considerate of the Occupational Health Safety and Welfare issues for both the women and staff involved in the care.

Each hospital providing the maternity services should have detailed standard operation procedures for the safe use of all bariatric equipment, as well as equipment checklists and flowcharts outlining the specific service provision for an obese obstetric woman. It should be noted in the detailed standard operation procedures that an obese obstetric woman will require additional nursing, physiotherapy, and occupational therapy of care when compared to a non-obese woman.

The detailed standard operating procedures should ensure an obese obstetric woman only has access to shower facilities and restricts an obese obstetric woman’s access to baths in the hospital.
Workforce implications

It is recognised that the management of an obese obstetric woman will at times demand additional resources than those required for contemporary care.

Determinants of the suitability of the maternity services workforce available at each level of service to manage the obese obstetric woman are defined in the Standards for Maternal & Neonatal Services in SA². Credentialing, admitting rights and clinical privileges for these health practitioners remain the responsibility of the employing hospital.

Workforce education

Perinatal health service providers require appropriate education and training to ensure staff are aware of the limitations and scope of their obstetric services and to ensure they have the appropriate competencies in the care of the obese woman and also the use of the specialist equipment used to support this care.

Description of the six levels of specific service delineation for the management of the Obese Obstetric Woman in SA:

- Complexity of Care
- Facilities
- Workforce
- Diagnostic Services
- Support Services
- Clinical Governance
- Services Links
- Education and Research.
### Level 1 Complexity of Care

**Maternal**

Level 1 hospitals and their available staff, as defined in the Standards for Maternity and Neonatal Services in SA, are limited in their capacity to provide a safe perinatal service. There is no capacity for the Level 1 hospital providing perinatal services to manage an obstetric woman including an obese obstetric woman.

Level 1 hospitals as defined in the Standards for Maternity and Neonatal Services in SA, should, in accordance with these standards, have appropriate formal policy/protocols which guide staff, ensuring all pregnant women are referred at the earliest opportunity, (preferably in the first trimester and before 20 weeks gestation if at all possible) to a maternity unit equipped with appropriate, suitable staff and facilities to manage the complexity of maternity care.

### Level 1 Facilities

Level 1 maternity unit and their available facilities, as defined in the Standards for Maternity and Neonatal Services in SA, are limited in their capacity to provide a safe perinatal service.

Level 1 maternity unit has no designated maternity care facilities for the management of any pregnant woman including those that are obese.

Level 1 maternity unit does have a responsibility to ensure an obese obstetric woman is safely transported by road or air, in vehicles with bariatric capacity. The transport plans for an obese obstetric woman should be cognisant of the following information:

- where appropriate, an obese obstetric woman should organise her own transport for travel.
- If aero-medical transport of a woman is expected, early consultation with MedSTAR is required.
- Royal Flying Doctor Service (RFDS) Central Operations - fixed wing can accommodate a woman weighing < 162kg & < 70cm width (additional advice can be sought from the RFDS)
- Australian helicopters can accommodate a woman weighing < 265kg.
- SA Ambulance Service road ambulances can accommodate a woman weighing ≤ 180kg.
- SA Ambulance Service can, upon request, facilitate additional equipment to transport a woman weighing ≤ 450kg.
### Level 1 Workforce

The Level 1 perinatal service will ensure the availability of a workforce as the Standards for Maternal & Neonatal Services in SA.

### Level 1 Diagnostics Services

The Level 1 perinatal service will ensure the availability of diagnostic services as the Standards for Maternal & Neonatal Services in SA.

### Level 1 Support Services

The Level 1 perinatal service will ensure the availability of support services as the Standards for Maternal & Neonatal Services in SA.
### Level 2 Complexity of Care

**Maternal**

The Level 2 maternity unit has capacity to manage the care of the ‘low risk’ pregnant woman during the antenatal and postnatal periods, but no capacity to manage birth, including that of the obese obstetric woman; as defined in the Standards for Maternity and Neonatal Services in SA.

The Level 2 maternity unit is able to provide antenatal care for a woman with no complications or co-morbidities (as outlined in section 3), who has a BMI <40kg/m² at the antenatal booking or any time during the antenatal period.

### Level 2 Workforce

The Level 2 perinatal service will ensure the availability of a workforce as the Standards for Maternal & Neonatal Services in SA.

### Level 2 Facilities

Level 2 maternity unit has no designated birthing facilities or any maternity care facilities including those appropriate for the management of the obese obstetric woman.

Level 2 maternity unit has a responsibility to manage the Occupational Health Safety and Welfare of the perinatal staff and have appropriate equipment available in the antenatal treatment areas, suitable for the management of an obese obstetric woman, including:

- Alternate sized large adult cuff 35-44cm or larger as required for measurement of blood pressure.
- Scales with the capacity to accurately weigh women ≤ 200kg.
- Waiting room chairs able to accommodate a woman weighing ≤ 200kg.
- Only floor mounted toilets installed – these comply with the Australian Standards 1172.1 and able to accommodate a woman weighing ≤ 400kg whereas wall mounted toilets do not comply with these standards.
- Access to standard barouches able to accommodate a woman weighing ≤ 250kg.
- Standard wheel chairs able to accommodate a woman weighing ≤ 120kg.
### Level 2 Facilities (continued)

Level 2 maternity unit has a responsibility to ensure an obese obstetric woman is safely transported by road or air, in vehicles with bariatric capacity. The transport plans for an obese obstetric woman should be cognisant of the following information:

- where appropriate, an obese obstetric woman should organise her own transport for travel.
- If aero-medical transport of a woman is expected, early consultation with MedSTAR is required.
- Royal Flying Doctor Service (RFDS) Central Operations - fixed wing can accommodate a woman weighing < 162kg & <70cm width (additional advice can be sought from the RFDS).
- Australian helicopters can accommodate a woman weighing < 265kg.
- SA Ambulance Service road ambulances can accommodate a woman weighing ≤ 180kg.
- SA Ambulance Service can, upon request, facilitate additional equipment to transport a woman weighing <450kg.

### Level 2 Diagnostics Services

The Level 2 perinatal service will ensure the availability of diagnostic services as the Standards for Maternal & Neonatal Services in SA.

### Level 2 Support Services

The Level 3 perinatal service will ensure the availability of support services as the Standards for Maternal & Neonatal Services in SA.
## Level 2 Clinical Governance

The Level 2 perinatal service will recognise its limitations and variations in the perinatal services required by the obese pregnant woman and document and substantiate these with an appropriate risk management strategy.

### Guidelines

The Level 2 perinatal service will be have formal policy/protocols which guide staff in the safe and appropriate care of the pregnant woman with an unexpected emergency until her transfer of care or a retrieval service is available.

The Level 2 perinatal service will have formal policy/protocols which guide staff in the safe, local management of the pregnant woman:

<table>
<thead>
<tr>
<th>BMI Category</th>
<th>Management Plan</th>
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<tbody>
<tr>
<td>≥35 and &lt; 40 kg/m² (no co-morbidities)</td>
<td>to be referred after 20 weeks gestation to a GP with Diploma RANZCOG, and to relocate to a residence of their choice, within the 150kms radius of that hospital no later than the completion of her 36 weeks gestation.</td>
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<tr>
<td>≥35 and &lt; 40 kg/m² (with co-morbidities)</td>
<td>to have a Specialist Obstetrician and Specialist Anaesthetist involved in their management to guide the assessment of pregnancy risk using Appendix 1 “Proforma to Assist the Anaesthetic Assessment of the Pregnant Woman with Increased BMI” which provides a guide for the Specialist Anaesthetic assessment. As per Appendix 2 “Flow Chart: Process to secure Anaesthetic Assessment with Specialist Anaesthetist for the Obese Obstetric Women in South Australia”, and to relocate to a residence of their choice, within the 150kms radius of that hospital no later than the completion of her 36 weeks gestation.</td>
</tr>
<tr>
<td>≥40 and &lt;45kg/m²</td>
<td>and who remains stable with no presenting complications or co-morbidities to have her care managed by a GP with Diploma RANZCOG but should have a Specialist Obstetrician and Specialist Anaesthetist involved in this management to guide the assessment of pregnancy risk and to determine the presence of co-morbidities (as outlined in section 3) using Appendix 1 “Proforma to Assist the Anaesthetic Assessment of the Pregnant Woman with Increased BMI” which provides a guide for the Specialist Anaesthetic assessment. As per Appendix 2 “Flow Chart: Process to secure Anaesthetic Assessment with Specialist Anaesthetist for the Obese Obstetric Women in South Australia”, and to relocate to a residence of their choice, within the 150kms radius of that hospital no later than the completion of her 36 weeks gestation.</td>
</tr>
<tr>
<td>≥45 and &lt; 59.9 kg/m² or ≥170kg</td>
<td>to refer care to a Specialist Obstetrician and a Specialist Anaesthetist who will collaborate and a plan, developed by her 34 week gestation, for her to birth in a maternity hospital Level 6, and to relocate to a residence of their choice, within the 150kms radius of that hospital no later than the completion of her 36 weeks gestation.</td>
</tr>
<tr>
<td>≥60 kg/m² or weighs ≥170kg</td>
<td>to refer care to a Specialist Obstetrician a Specialist Anaesthetist who will collaborate and a plan, developed by her 34 week gestation, for her to birth in a level 6 maternity hospital with an onsite adult ICU, and to relocate to a residence of their choice, within the 150kms radius of that hospital no later than the completion of her 36 weeks gestation.</td>
</tr>
</tbody>
</table>
Level 2 Clinical Governance (continued)

- requiring an anaesthetic assessment that should be undertaken in accordance with the professional standards of the Australian and New Zealand College of Anaesthetists using Appendix 1 “Proforma to Assist the Anaesthetic Assessment of the Pregnant Woman with Increased BMI” which provides a guide for the Specialist Anaesthetic assessment. As per Appendix 2 “Flow Chart: Process to secure Anaesthetic Assessment with Specialist Anaesthetist for the Obese Obstetric Women in South Australia”, including:
  - Consideration of the American Society Anaesthesiologists patient classification (ASA PS)
  - Assessment of co-morbidities (as outlined in section 3), particularly those associated which increased the risks of anaesthesia.
  - Assessment of difficulty of venous access.
  - Assessment of difficulty of intubation and plan for intubation if required.
  - Assessment for regional anaesthesia.
  - A plan for birth including the consideration to inform an Anaesthetist (privileged to provide obstetric anaesthesia) on admission in labour.

Level 2 Services Links

Transfer guidelines
The Level 2 perinatal service will have formal policy/protocols which guide staff in the safe transfer of care of the obese pregnant woman in accordance with the Standards for Maternal & Neonatal Services in SA.

Communication guidelines
The Level 2 perinatal service will have formal policy/protocols which guide staff in the appropriate communication systems to support the safe care of the obese pregnant woman in accordance with the Standards for Maternal & Neonatal Services in SA.

Level 2 Education
The Level 2 perinatal service will ensure all perinatal health practitioners have access to perinatal related education, including emergency care as per the Standards for Maternal & Neonatal Services in SA.
## Level 3 Complexity of Care

| Maternal | A Level 3 maternity unit has capacity to provide safe perinatal, (including antenatal, intrapartum and postnatal) care for the woman as per the Standards for Maternal & Neonatal Services in SA who has a BMI <40kg/m² at the antenatal booking or any time during the antenatal period. It may be deemed appropriate that this care be managed in consultation with a Specialist Obstetrician and/or Specialist Anaesthetist. |

## Level 3 Facilities

| Birth rooms | Designated birthing rooms in the health unit equipped as per the Standards for Maternal & Neonatal Services in SA |

A responsibility to manage the Occupational Health Safety and Welfare of the perinatal staff and have appropriate equipment available in the perinatal treatment areas, suitable for the management of an obese obstetric woman, including:

- Large sized adult blood pressure cuff 35-44cm or larger as required.
- Hospital gowns with sizes to will ensure a woman’s modesty.
- Scales with the capacity to accurately weigh women ≤ 200kg.
- Waiting room chairs able to accommodate a woman weighing ≤ 200kg.
- Examination couch able to accommodate a woman weighing ≤ 200kg.
- Only floor mounted toilets – these comply with the Australian Standards 1172.1 and able to accommodate a woman weighing ≤ 200kg (wall mounted toilets do not comply with these standards).
### Level 3 Facilities (continued)

<table>
<thead>
<tr>
<th>Birth rooms (continued)</th>
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<tbody>
<tr>
<td>▪ Standard barouches able to accommodate a woman weighing ≤ 250kg.</td>
<td></td>
</tr>
<tr>
<td>▪ Access to shower facilities only and restrict the bariatric obstetric woman who weighs ≥ 130kg access to baths in the hospital.</td>
<td></td>
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<tr>
<td>▪ Wheel chairs able to accommodate a woman weighing ≤ 160kg.</td>
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<tr>
<td>▪ A ‘Hover matt’ - a lateral Transfer Device able to accommodate a woman weighing ≤ 300kg.</td>
<td></td>
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<tr>
<td>▪ Standard labour ward bed able to accommodate a woman weighing ≤ 227kg.</td>
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<tr>
<td>▪ Patient lifter and slings able to accommodate a woman weighing ≤ 200kg.</td>
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</tr>
<tr>
<td>▪ Standard electric hospital bed only, with electric functions to tilt, head down, head up, feet down, feet up, raise and lower bed, able to accommodate a woman weighing ≤ 267kg (NB without self-help poles fitted as these are only able to accommodate a woman weighing ≤ 75kg).</td>
<td></td>
</tr>
<tr>
<td>▪ Electric bed mover able to fit electric beds and wheel chairs.</td>
<td></td>
</tr>
<tr>
<td>▪ Electric recliner chair able to accommodate a woman weighing ≤ 250kg.</td>
<td></td>
</tr>
<tr>
<td>▪ Electronic calf stimulators.</td>
<td></td>
</tr>
<tr>
<td>▪ A responsibility to ensure an obese obstetric woman is safely transported by road or air, in vehicles with bariatric capacity. The transport plans for an obese obstetric woman should be cognisant of the following information:</td>
<td></td>
</tr>
<tr>
<td>▪ where appropriate, an obese obstetric woman should organise her own transport for travel.</td>
<td></td>
</tr>
<tr>
<td>▪ If aero-medical transport of a woman is expected, early consultation with MedSTAR is required.</td>
<td></td>
</tr>
<tr>
<td>▪ Royal Flying Doctor Service (RFDS) Central Operations - fixed wing can accommodate a woman weighing &lt; 162kg &amp; &lt;70cm width (additional advice can be sought from the RFDS).</td>
<td></td>
</tr>
<tr>
<td>▪ Australian helicopters can accommodate a woman weighing &lt; 265kg.</td>
<td></td>
</tr>
<tr>
<td>▪ SA Ambulance Service road ambulances can accommodate a woman weighing ≤ 180kg.</td>
<td></td>
</tr>
<tr>
<td>▪ SA Ambulance Service can, upon request, facilitate additional equipment to transport a woman weighing &lt;450kg.</td>
<td></td>
</tr>
</tbody>
</table>
### Level 3 Workforce

The Level 3 perinatal service will ensure the availability of a workforce as the Standards for Maternal & Neonatal Services in SA.

### Level 3 Diagnostics Services

The Level 3 perinatal service will ensure the availability of diagnostic services as the Standards for Maternal & Neonatal Services in SA.

### Level 3 Support Services

The Level 3 perinatal service will ensure the availability of support services as the Standards for Maternal & Neonatal Services in SA.

### Level 3 Clinical Governance

The Level 3 perinatal service will recognise its limitations and variations in the perinatal services required by the obese pregnant woman and document and substantiate these with an appropriate risk management strategy.

**Guidelines**

The Level 3 perinatal service will have formal policy/protocols as per the Standards for Maternal & Neonatal Services in SA which guide staff in the safe, local management of the pregnant woman and in addition will have those specific to the management of the obese pregnant women, including those:

- with a BMI of \( \geq 35 \text{ and } < 40 \text{ kg/m}^2 \) (with no co-morbidities) to be referred after 20 weeks gestation to a Registered medical practitioner(s) with credentials as a specialist GP obstetrician or GP obstetric proceduralist who has formal arrangements to undertake the South Australian GP Obstetric Shared-Care Program

- with a BMI of \( \geq 35 \text{ and } < 40 \text{ kg/m}^2 \) (with co-morbidities) to have a Specialist Obstetrician and Specialist Anaesthetist involved in their management to guide the assessment of pregnancy risk using Appendix 1, “Proforma to Assist the Anaesthetic Assessment of the Pregnant Woman with Increased BMI” which provides a guide for the Specialist Anaesthetic assessment. As per Appendix 2 “Flow Chart: Process to secure Anaesthetic Assessment with Specialist Anaesthetist for the Obese Obstetric Women in South Australia”

- with a BMI of \( \geq 45 \text{ and } < 60.9 \text{ kg/m}^2 \) to refer care to a Specialist Obstetrician and a Specialist Anaesthetist who will collaborate and a plan, developed by her 34 week gestation, for her to birth in a maternity hospital Level 5 or 6 and and to relocate to a residence of their choice, within the 150kms radius of that hospital no later than the completion of her 36 weeks gestation

- with a BMI of \( \geq 60 \text{ kg/m}^2 \text{ or weighs } \geq 170 \text{ kg} \) to refer care to a Specialist Obstetrician a Specialist Anaesthetist who will collaborate and a plan, developed by her 34 week gestation, for her to birth in a level 6 maternity hospital with an onsite adult ICU, and to relocate to a residence of their choice, within the 150kms radius of that hospital no later than the completion of her 36 weeks gestation.
### Level 3 Clinical Governance (continued)

- requiring an anaesthetic assessment that should be undertaken in accordance with the professional standards of the Australian and New Zealand College of Anaesthetists using **Appendix 1** “Proforma to Assist the Anaesthetic Assessment of the Pregnant Woman with Increased BMI” which provides a guide for the Specialist Anaesthetic assessment. As per **Appendix 2** “Flow Chart: Process to secure Anaesthetic Assessment with Specialist Anaesthetist for the Obese Obstetric Women in South Australia”, including:
  - Consideration of the American Society Anaesthesiologists patient classification (ASA PS)
  - Assessment of co-morbidities (as outlined in section 3), particularly those associated which increased the risks of anaesthesia.
  - Assessment of difficulty of venous access.
  - Assessment of difficulty of intubation and plan for intubation if required.
  - Assessment for regional anaesthesia.
  - A plan for birth including the consideration to inform an Anaesthetist (privileged to provide obstetric anaesthesia) on admission in labour.

### Level 3 Services Links

**Transfer guidelines**

The Level 3 perinatal service will have formal policy/protocols which guide staff in the safe transfer of care of the obese pregnant woman in accordance with the Standards for Maternal & Neonatal Services in SA.

**Communication guidelines**

The Level 3 perinatal service will have formal policy/protocols which guide staff in the appropriate communication systems to support the safe care of the obese pregnant woman in accordance with the Standards for Maternal & Neonatal Services in SA. Will have formal policy/protocols which guide staff in the:

### Level 3 Education

The Level 3 perinatal service will ensure all perinatal health practitioners have access to perinatal related education, including emergency care as per the Standards for Maternal & Neonatal Services in SA.
### Level 4 Complexity of Care

| Maternal | Capacity to provide safe care for the woman as per the Standards for Maternal and Neonatal Services in SA who has a BMI <45kg/m² at antenatal booking or any time during the antenatal period. It may be deemed appropriate that this care be managed in consultation with a Specialist Obstetrician and/or Specialist Anaesthetist. |

### Level 4 Facilities

| Birthrooms | Designated birthing rooms in the health unit equipped as per the Standards for Maternal & Neonatal Services in SA |

A responsibility to manage the Occupational Health Safety and Welfare of the perinatal staff and have appropriate equipment available in the perinatal treatment areas, suitable for the management of an obese obstetric woman, including:

- Large sized adult blood pressure cuff 35-44cm or larger as required.
- Hospital gowns with sizes to will ensure a woman’s modesty.
- Scales with the capacity to accurately weigh women ≤ 200kg.
- Waiting room chairs able to accommodate a woman weighing ≤ 200kg.
- Examination couch able to accommodate a woman weighing ≤ 200kg.
- Only floor mounted toilets – these comply with the Australian Standards 1172.1 and able to accommodate a woman weighing ≤ 400kg (wall mounted toilets do not comply with these standards).
- Standard barouches able to accommodate a woman weighing ≤ 250kg
- Access to shower facilities only and restrict the bariatric obstetric woman who weighs ≥ 130kg access to baths in the hospital.
- Wheel chairs able to accommodate a woman weighing ≤ 160kg.
- A ‘Hover Matt’ - a lateral Transfer Device able to accommodate a woman weighing 300kg.
- Standard labour ward bed able to accommodate a woman weighing ≤ 227kg.
- Electronic calf stimulators
- Patient lifter and slings able to accommodate a woman weighing ≤ 200kg.
- Standard electric hospital bed only, with electric functions to tilt, head down, head up, feet down, feet up, raise and lower bed, able to accommodate a woman weighing ≤ 267kg (NB without self-help poles fitted as these are only able to accommodate a woman weighing ≤ 75kg).
- Electric bed mover able to fit electric beds and wheel chairs.
- Electric recliner chair able to accommodate a woman weighing ≤ 250kg.
- Electronic calf stimulators.
### Level 4 Workforce

The Level 4 perinatal service will ensure the availability of a workforce as the Standards for Maternal & Neonatal Services in SA.

### Level 4 Diagnostics Services

The Level 4 perinatal service will ensure the availability of diagnostic services as the Standards for Maternal & Neonatal Services in SA.

### Level 4 Support Services

The Level 4 perinatal service will ensure the availability of support services as the Standards for Maternal & Neonatal Services in SA.

### Level 4 Clinical Governance

The Level 4 perinatal service will recognise its limitations and variations in the perinatal services required by the obese pregnant woman and document and substantiate these with an appropriate risk management strategy.

**Guidelines**

The Level 4 perinatal service will have formal policy/protocols as per the Standards for Maternal & Neonatal Services in SA which guide staff in the safe, local management of the pregnant woman and in addition will have those specific to the management of the obese pregnant woman, including those:

- with a BMI of ≥35 and < 40 kg/m² (with no co-morbidities (as outlined in section 3) to be referred after 20 weeks gestation to a Registered medical practitioner(s) with credentials as a specialist GP obstetrician or GP obstetric proceduralist who has formal arrangements to undertake the South Australian GP Obstetric Shared-Care Program.

- with a BMI of ≥35 and < 40 kg/m² (with co-morbidities) to have a Specialist Obstetrician and Specialist Anaesthetist involved in their management to guide the assessment of pregnancy risk using Appendix 1 “Proforma to Assist the Anaesthetic Assessment of the Pregnant Woman with Increased BMI” which provides a guide for the Specialist Anaesthetic assessment. As per Appendix 2 “Flow Chart: Process to secure Anaesthetic Assessment with Specialist Anaesthetist for the Obese Obstetric Women in South Australia”
### Level 4 Clinical Governance (continued)

<table>
<thead>
<tr>
<th>Condition</th>
<th>Management</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>with a BMI of ≥40 and &lt;45kg/m²</strong> and who remains stable with no presenting complications or co-morbidities to have her care managed by a Registered medical practitioner(s) with credentials as a specialist GP obstetrician or GP obstetric proceduralist who has formal arrangements to undertake the South Australian GP Obstetric Shared-Care Program but should have a Specialist Obstetrician and Specialist Anaesthetist involved in this management to guide the assessment of pregnancy risk and to determine the presence of co-morbidities (as outlined in section 3) using Appendix 1 “Proforma to Assist the Anaesthetic Assessment of the Pregnant Woman with Increased BMI” which provides a guide for the Specialist Anaesthetic assessment. As per Appendix 2 “Flow Chart: Process to secure Anaesthetic Assessment with Specialist Anaesthetist for the Obese Obstetric Women in South Australia”. There should be a plan developed by her 34 week gestation, for her to birth at the local Level 4 unit or in a maternity hospital Level 5 or 6, (as recommended by the Specialist Obstetrician and/or Specialist Anaesthetist), and to relocate to a residence of their choice, within the 150kms radius of that hospital at no later than the completion of her 36 weeks gestation.</td>
<td></td>
</tr>
<tr>
<td><strong>with a BMI of ≥45 and &lt; 59.9kg/m²</strong> to refer care to a Specialist Obstetrician and a Specialist Anaesthetist who will collaborate and a plan, developed by her 34 week gestation, for her to birth in a maternity hospital Level 5 or 6 and to relocate to a residence of their choice, within the 150kms radius of that hospital at no later than the completion of her 36 weeks gestation.</td>
<td></td>
</tr>
<tr>
<td><strong>with a BMI of ≥60kg/m² or weighs ≥170kg</strong> refer care to a Specialist Obstetrician and a Specialist Anaesthetist who will collaborate and a plan, developed by her 34 week gestation, for her to birth in a level 6 maternity hospital with an onsite adult ICU, and to relocate to a residence of their choice, within the 150kms radius of that hospital at no later than the completion of her 36 weeks gestation.</td>
<td></td>
</tr>
</tbody>
</table>
Level 4 Clinical Governance (continued)

- requiring an anaesthetic assessment that should be undertaken in accordance with the professional standards of the Australian and New Zealand College of Anaesthetists using Appendix 1 “Proforma to Assist the Anaesthetic Assessment of the Pregnant Woman with Increased BMI” which provides a guide for the Specialist Anaesthetic assessment. As per Appendix 2 “Flow Chart: Process to secure Anaesthetic Assessment with Specialist Anaesthetist for the Obese Obstetric Women in South Australia”, including:
  - Consideration of the American Society Anaesthesiologists patient classification (ASA PS)
  - Assessment of co-morbidities (as outlined in section 3), particularly those associated which increased the risks of anaesthesia.
  - Assessment of difficulty of venous access.
  - Assessment of difficulty of intubation and plan for intubation if required.
  - Assessment for regional anaesthesia.
  - A plan for birth including the consideration to inform an Anaesthetist (privileged to provide obstetric anaesthesia) on admission in labour.

Level 4 Services Links

Transfer guidelines
The Level 4 perinatal service will have formal policy/protocols which guide staff in the safe transfer of care of the obese pregnant woman in accordance with the Standards for Maternal & Neonatal Services in SA.

Communication guidelines
The Level 4 perinatal service will have formal policy/protocols which guide staff in the appropriate communication systems to support regarding the safe care of the obese pregnant woman in accordance with the Standards for Maternal & Neonatal Services in SA.

Level 4 Education
The Level 4 perinatal service will ensure all perinatal health practitioners have access to perinatal care related education, including emergency care as the Standards for Maternal & Neonatal Services in SA.
<table>
<thead>
<tr>
<th>Complexity of Care</th>
<th>Facilities</th>
</tr>
</thead>
</table>
| Maternal           | Designated birthing rooms in the health unit equipped as per the Standards for Maternal & Neonatal Services in SA. A responsibility to manage the Occupational Health Safety and Welfare of the perinatal staff and have appropriate equipment available in the perinatal treatment areas and birthing rooms, suitable for the management of an obese obstetric woman, including:  
  - Large sized adult blood pressure cuff 35-44cm or larger as required.  
  - Hospital gowns with sizes to will ensure a woman’s modesty.  
  - Scales with the capacity to accurately weigh women ≤ 200kg.  
  - Waiting room chairs able to accommodate a woman weighing ≤ 200kg.  
  - Examination couch able to accommodate a woman weighing ≤ 200kg.  
  - Only floor mounted toilets – these comply with the Australian Standards 1172.1 and able to accommodate a woman weighing ≤ 400kg (wall mounted toilets do not comply with these standards).  
  - Standard barouches able to accommodate a woman weighing ≤ 250kg.  
  - Labour ward bed able to accommodate all women regardless of weight.  
  - A suitable ultrasound machine should be available for the anaesthetist to assist with insertion of venous cannula in those women with difficult venous access. |  
| Level 5 or 6 (without an onsite adult ICU) |  
| Operating Rooms | A responsibility to manage the Occupational Health Safety and Welfare of the perinatal staff and have appropriate bariatric equipment available in the Operating Rooms, including:  
  - Theatre bed able to accommodate all women regardless of weight. Theatre bed should include:  
    - at least two (2) bed width extenders  
    - additional arm boards  
    - safety straps used to support the patient when in lateral tilt position  
    - stirrups able to support woman >160kg – <360kg  
    - Positioning wedge sandbags (used when the bed is unable to be tilted).  
    - Retractors suitable for retracting the panis/apron for a woman weighing >160kg.  
    - Long and large surgical equipment.  
    - Electronic calf stimulators. |
Obese Obstetric Woman - Management in South Australia 2019 Clinical Directive

Level 5 or 6 (without an onsite adult ICU) Workforce

The Level 5 or 6 perinatal service (without an onsite adult ICU) will ensure the availability of a workforce as per the Standards for Maternal & Neonatal Services in SA.

Level 5 or 6 (without an onsite adult ICU) Support Services

The Level 5 or 6 perinatal service (without an onsite adult ICU) will ensure the availability of support services as the Standards for Maternal & Neonatal Services in SA.

Level 5 or 6 (without an onsite adult ICU) Diagnostics Services

The Level 5 or 6 perinatal service (without an onsite adult ICU) will ensure the availability of diagnostic services as per the Standards for Maternal & Neonatal Services in SA.

Level 5 or 6 (without an onsite adult ICU) Clinical Governance

The Level 5 or 6 perinatal service (without an onsite adult ICU) will recognise its limitations and variations in the perinatal services required by the obese pregnant woman and document and substantiate these with an appropriate risk management strategy.

Guidelines

The Level 5 or 6 perinatal service (without an onsite adult ICU) will have formal policy/protocols for the management of the pregnant woman as per the Standards for Maternal & Neonatal Services in SA and in addition will have those specific to the management of the obese pregnant women, including those:

- with a BMI of 30 - ≤ 60kg/m² as per the Level 1-4 in these standards.
- with a BMI of ≥ 60kg/m² or weighs ≥ 170kg to ensure they are referred after 20 weeks gestation to a Specialist Obstetrician, and a Specialist Anaesthetist at a Level 5 or 6 public maternity hospital with an onsite adult intensive care unit to manage their perinatal care, and that the woman is directed by her 34 week gestation, to relocate to a residence of their choice within the 150kms radius of that maternity hospital at no later than her completed 36 weeks gestation.

Level 5 or 6 (without an onsite adult ICU) Clinical Governance

- with BMI ≥ 45 kg/m² who is referred to a Specialist Obstetrician and Specialist Anaesthetist assessment/consultation. Appendix 1 provides a guide for the Specialist Anaesthetic assessment. Appendix 2 explains the process to secure a Specialist Anaesthetic assessment.

Able to undertake a Specialist Anaesthetist assessment as required: that should be undertaken in accordance with the professional standards of the Australian and New Zealand College of Anaesthetists. Appendix 1 provides a guide for the Specialist Anaesthetic assessment. Appendix 2 explains the process to secure a Specialist Anaesthetic assessment. This assessment can be undertaken by phone, teleconference, video conference or with the woman in person. Including:

- Assessment of co-morbidities, particularly those associated which increased the risks of anaesthesia.
- Assessment of difficulty of venous access.
- Assessment of difficulty of intubation and plan for intubation if required.
- Assessment for regional anaesthesia.
- A plan for birth including the consideration for early notification of an Anaesthetist (privileged to provide obstetric anaesthesia) on admission in labour.
<table>
<thead>
<tr>
<th>Level 5 or 6 (without an onsite ICU)</th>
<th>Services Links</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Transfer guidelines</strong></td>
<td>The Level 5 or 6 perinatal service (without an onsite adult ICU) will have formal policy/protocols which guide staff in the safe transfer of care of the obese pregnant woman in accordance with the Standards for Maternal &amp; Neonatal Services in SA, also ensuring preparedness to accept the transfer of perinatal care for the obese obstetric woman as appropriate.</td>
</tr>
<tr>
<td><strong>Communication guidelines</strong></td>
<td>The Level 5 or 6 perinatal service (without an onsite adult ICU) will have formal policy/protocols which guide staff in the appropriate communication systems to support regarding the safe care of the obese pregnant woman in accordance with the Standards for Maternal &amp; Neonatal Services in SA. The Level 5 or 6 perinatal service (without an onsite adult ICU) will support statewide perinatal consultant advice as required and accommodate the roster of the statewide perinatal emergency advice line.</td>
</tr>
<tr>
<td>Level 5 or 6 (without an onsite adult ICU)</td>
<td>Education</td>
</tr>
<tr>
<td>The Level 5 or 6 perinatal service (without an onsite adult ICU) will ensure health practitioners have access to perinatal care related education, including emergency care as per the Standards for Maternal &amp; Neonatal Services in SA. The Level 5 or 6 perinatal service (without an onsite adult ICU) health practitioners will support the statewide perinatal emergency education programs.</td>
<td></td>
</tr>
</tbody>
</table>
### Level 5 or 6 (with an onsite adult ICU) Complexity of Care

**Maternal**  
Capacity to provide comprehensive care for ‘low – high risk’ obese obstetric women with any BMI including those with a BMI ≥60kg/m² or weighs ≥170kg. The management model is multidisciplinary and provides for the care for those more complex conditions associated with obesity in pregnancy including those requiring intensive care as per the Standards for Maternal & Neonatal Services in SA.

### Level 5 or 6 (with an onsite adult ICU) Facilities

#### Birth rooms

Designated birthing rooms in the health unit equipped as per the Standards for Maternal & Neonatal Services in SA

A responsibility to manage the Occupational Health Safety and Welfare of the perinatal staff and have appropriate equipment available in all of the perinatal treatment areas, including birthing areas suitable for the management of an obese obstetric woman, including:

- Alternate sized large adult cuff 35-44cm or larger as required for measurement of blood pressure.
- Hospital gowns with sizes to will ensure a woman’s modesty
- Scales with the capacity to accurately weigh women ≤200kg.
- Waiting room chairs able to accommodate a woman weighing ≤200kg.
- Examination couch able to accommodate a woman weighing ≤200kg.
- Only floor mounted toilets – these comply with the Australian Standards 1172.1 and able to accommodate a woman weighing ≤ 400kg (wall mounted toilets do not comply with these standards)
- Standard barouches able to accommodate a woman weighing ≤250kg.
- Shower facilities only and restrict an obese obstetric woman who weighs ≥130kg access to baths in the hospital.
- Wheel chairs able to accommodate a woman weighing ≤160kg.
- A ‘Hover matt’ – a lateral Transfer Device able to accommodate a woman weighing ≤300kg.
- A patient lifter and slings able to accommodate a woman weighing ≤200kg.
- Standard electric hospital bed only, with electric functions to tilt, head down, head up, feet down, feet up, raise and lower bed, able to accommodate a woman weighing ≤267kg NB without self-help poles fitted as these are only able to accommodate a woman weighing ≤75kg.
- Electric bed mover able to fit electric beds and wheel chairs
- Labour ward bed able to accommodate all women regardless of weight
Level 5 or 6 (with an onsite adult ICU) Facilities (continued)

Birth Rooms (continued)

- A suitable ultrasound machine should be available for the anaesthetist to assist with insertion of venous cannula in those women with difficult venous access

Operating rooms

A responsibility to manage the Occupational Health Safety and Welfare of the perinatal staff and have appropriate equipment available in the Operating Rooms, including:

- Theatre bed able to accommodate all women regardless of weight. Theatre bed should include:
  - at least two (2) bed width extenders
  - additional arm boards
  - safety straps used to support the patient when in lateral tilt position
  - stirrups able to support woman >160kg – <360kg
  - Positioning wedge sandbags (used when the bed is unable to be tilted).
  - Retractors suitable for retracting the penis/apron for a woman weighing >160kg.
  - Long and large surgical equipment.
  - Electronic calf stimulators.

Level 5 or 6 (with an onsite adult ICU) Workforce

The Level 5 or 6 perinatal service (with an onsite adult ICU) will ensure the availability of a workforce as per the Standards for Maternal & Neonatal Services in SA

Level 5 or 6 (with an onsite adult ICU) Diagnostics Services

The Level 5 or 6 perinatal service (with an onsite adult ICU) will availability of diagnostic services as per the Standards for Maternal & Neonatal Services in SA

Level 5 or 6 (with an onsite adult ICU) Support Services

The Level 5 or 6 perinatal service (with an onsite adult ICU) will ensure availability of support services as the Standards for Maternal & Neonatal Services in SA
Level 5 or 6 (with an onsite adult ICU)  Clinical Governance

Whilst it is recognised that variations in the services provided may be warranted as unique patients, resources and limitations to services arise, it is recommended that these variations are documented and substantiated with an appropriate risk management policy and strategy.

**Guidelines** Will have formal policy/protocols to guide staff, in the safe, local management of the obese obstetric women, regardless of their BMI or body weight, including policy/protocols as per the Standards for Maternity and Neonatal Services in SA, ensuring preparedness to accept the transfer of perinatal care for the obese obstetric woman;

- with a BMI of $\geq 60 \text{kg/m}^2$ or weighs $\geq 170 \text{kg}$ from any site across South Australia.
- with BMI $\geq 45 \text{ kg/m}^2$ requiring the Specialist Obstetrician and Specialist Anaesthetist assessment/consultation: Appendix 1 provides a guide for the Specialist Anaesthetic assessment. Appendix 2 explains the process to secure a Specialist Anaesthetic assessment.
- Able to undertake an anaesthetic assessment as required: undertaken in accordance with the professional standards of the Australian and New Zealand College of Anaesthetists using Appendix 1 “Proforma to Assist the Anaesthetic Assessment of the Pregnant Woman with Increased BMI” provides a guide for the Specialist Anaesthetic assessment. As per Appendix 2 “Flow Chart: Process to secure Anaesthetic Assessment with Specialist Anaesthetist for the Obese Obstetric Women in South Australia”. This assessment should be undertaken with the woman in person, when the woman has a BMI of $\geq 60 \text{kg/m}^2$ or weighs $\geq 170 \text{kg}$. The assessment should include;
  - Assessment of co-morbidities, particularly those associated which increased the risks of anaesthesia.
  - Assessment of difficulty of venous access.
  - Assessment of difficulty of intubation and plan for intubation if required.
  - Assessment for regional anaesthesia.
  - A plan for birth including the consideration for early notification of an Anaesthetist (privileged to provide obstetric anaesthesia) on admission in labour.
Transfer guidelines
The Level 5 or 6 perinatal service (with an onsite adult ICU) will have formal policy/protocols which guide staff in the safe transfer of care of the obese pregnant woman in accordance with the Standards for Maternal & Neonatal Services in SA, also ensuring preparedness to accept the transfer of perinatal care for the obese obstetric woman as appropriate.

Communication guidelines
The Level 5 or 6 perinatal service (with an onsite adult ICU) will have formal policy/protocols which guide staff in the appropriate communication systems to support regarding the safe care of the obese pregnant woman in accordance with the Standards for Maternal & Neonatal Services in SA.

The Level 5 or 6 perinatal service (with an onsite adult ICU) will support statewide perinatal consultant advice as required and accommodate the roster of the statewide perinatal emergency advice line.

Education
The Level 5 or 6 perinatal service (with an onsite adult ICU) will ensure health practitioners have access to perinatal care related education, including emergency care as per the Standards for Maternal & Neonatal Services in SA.

The Level 5 or 6 perinatal service (with an onsite adult ICU) health practitioners will support the statewide perinatal emergency education programs.
APPENDIX 1

Proforma to Assist the Anaesthetic Assessment of the Pregnant Woman with Increased BMI

An anaesthetic assessment of the pregnant woman with a BMI>40kgm² SHOULD BE BOOKED @ 20 WEEKS GESTATION & undertaken @>26 weeks gestation will assist in identifying those that may be difficult to intubate. It is suggested that the patient information be completed prior to making a telephone consultation appointment time with a Specialist Anaesthetist.

(This proforma can be utilised when requesting other perinatal advice regarding the pregnant woman)

GP/Doctor PLEASE Email or Fax the completed form and the woman’s SA Pregnancy Record – (include pages - Contact Details, Personal History) to the Specialist Anaesthetist prior to the consultation appointment.

<table>
<thead>
<tr>
<th>DATE appointment booked with SPECIALIST ANAESTHETIST</th>
<th>TIME booked</th>
</tr>
</thead>
<tbody>
<tr>
<td>NAME of the PATIENT: ..................................</td>
<td>DOB: ........</td>
</tr>
<tr>
<td>ADDRESS of the PATIENT: ................................</td>
<td>PATIENT Phone Number: .......................</td>
</tr>
<tr>
<td>................................................................................</td>
<td>Receiving GP/Doctor Phone Number: ...........</td>
</tr>
<tr>
<td>NAME of referring GP/Doctor: ............................</td>
<td>Referring GP/Doctor Phone Number: ...........</td>
</tr>
<tr>
<td>ADDRESS of referring GP/Doctor: ........................</td>
<td>EMAIL address GP/Doctor: ......................</td>
</tr>
<tr>
<td>NAME of ANAESTHETIC/DEPARTMENT: .........................</td>
<td>CONTACT Details: ..............................</td>
</tr>
</tbody>
</table>

### PATIENT INFORMATION

<table>
<thead>
<tr>
<th>Woman weight @ booking .......... kg</th>
<th>History of C Section</th>
<th>YES ☐ NO ☐</th>
</tr>
</thead>
<tbody>
<tr>
<td>Woman current weight @ .......... kg</td>
<td>C Section - GA</td>
<td>YES ☐ NO ☐</td>
</tr>
<tr>
<td></td>
<td>C Section – spinal / epidural (please circle)</td>
<td>YES ☐ NO ☐</td>
</tr>
<tr>
<td></td>
<td>Hospital: ...................... YEAR: ........</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Details: ..........................</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Woman current BMI ..............kgm²</th>
<th>Measure the thyromental distance (the distance between the lower border of the mandible to the thyroid notch) is greater than four fingerbreadths, ie Woman is able to open their mouth more than three fingers breadth.</th>
<th>YES ☐ NO ☐</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current gestation ............... weeks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Para: .................................</td>
<td></td>
<td></td>
</tr>
<tr>
<td>History asthma or bronchitis</td>
<td>YES ☐ NO ☐</td>
<td>Assess, sitting the patient upright with the head in a normal position, mouth open as wide as possible and tongue poking out. The airway should then be given a Mallampati score depending on how much of the oral cavity can be seen</td>
</tr>
<tr>
<td>Details: ..........................</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Snoring or sleep apnoea</td>
<td>YES ☐ NO ☐</td>
<td>Class 1: soft palate, uvula, fauces and pillars;</td>
</tr>
<tr>
<td>Able to touch their chin to their chest and also extend their neck backwards.</td>
<td>YES ☐ NO ☐</td>
<td>Class 2: soft palate, uvula, fauces</td>
</tr>
<tr>
<td>Loose teeth or dentures</td>
<td>YES ☐ NO ☐</td>
<td>Class 3: only soft palate</td>
</tr>
<tr>
<td>Prominent upper front teeth</td>
<td>YES ☐ NO ☐</td>
<td>Class 4: soft palate not visible</td>
</tr>
<tr>
<td>Broken or dental caries, upper front teeth</td>
<td>YES ☐ NO ☐</td>
<td></td>
</tr>
<tr>
<td>History of arthritis in the neck</td>
<td>YES ☐ NO ☐</td>
<td></td>
</tr>
<tr>
<td>Good cervical/neck movement</td>
<td>YES ☐ NO ☐</td>
<td></td>
</tr>
<tr>
<td>History of difficulties with anaesthesia</td>
<td>YES ☐ NO ☐</td>
<td></td>
</tr>
<tr>
<td>Hospital: ...................... YEAR: ........</td>
<td>Details: ..........................</td>
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Class 1: soft palate, uvula, fauces and pillars;
Class 2: soft palate, uvula, fauces
Class 3: only soft palate
Class 4: soft palate not visible

Mallampati score ☐
Following consultation, the Consultant Anaesthetist will return the **completed form** to the referring Doctor via FAX or EMAIL for storage in the woman’s SA Pregnancy Record.
Management of the Obese Obstetric Woman in SA

Pregnant Woman with NO COMPLICATIONS and a BMI >35 - < 40kg/m²

- Plan for woman to birth at a Level 3, 4, 5 or 6 Maternity Unit
  - Care should be managed by a Registered Midwife, Registered medical practitioner(s) with credentials as a specialist GP obstetrician or GP obstetric proceduralist who has formal arrangements to undertake the South Australian GP Obstetric Shared-Care Program or Specialist Obstetrician in consultation with and a GP Anaesthetist (privileged to provide anaesthesia and regularly provides obstetric anaesthesia) or a Specialist Anaesthetist

Pregnant Woman with a BMI >40 - < 45kg/m²

- Plan for woman to birth at a Level 3, 4, 5 or 6 Maternity Unit
  - Should have a management plan developed in consultation with a Specialist Obstetrician and Specialist Anaesthetist and in accordance with the ACMI National Midwifery Guidelines for Consultation and Referral 2014

Pregnant Woman with a BMI ≥ 45 – 59.9kg/m²

- Care should be managed by a Specialist Obstetrician in consultation with and Specialist Anaesthetist

Pregnant Woman with a BMI ≥ 60kg/m² or ≥ 170kg

- Woman can plan to birth at a Level 5 or 6 Maternity Unit with onsite adult ICU facilities

Pregnant women who has a BMI ≥45 kg/m² should have a plan, developed by her 34 week gestation, for her to birth in a maternity hospital Level 4, 5 or 6, (as recommended by the Specialist Obstetrician and/or Specialist Anaesthetist), and to relocate to a residence of their choice, within the 150kms radius of that hospital at no later than the completion of her 36 weeks gestation.
Obese Obstetric Woman - Management in South Australia 2019
Clinical Directive

5. Implementation and Monitoring

The incidence of obesity in pregnancy in South Australia is recorded in the South Australia Pregnancy Record and collated by the SA Health Pregnancy Outcome Unit and reported annually.

6. National Safety and Quality Health Service Standards

|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|

☐ ☒ ☐ ☐ ☒ ☒ ☐ ☒

7. Definitions

Bariatric Surgery

For the purposes of these standards, bariatric surgery is defined as surgery on the stomach and/or intestines to help a person with extreme obesity lose weight.

Body Mass Index (BMI)

One of the anthropometric measures of body mass; it has the highest correlation with skin fold thickness or body density. BMI is an accurate reflection of fat percentage in the majority of the adult population.

Calculated: \[ BMI = \frac{\text{weight (kg)}}{\text{height}^2 \text{ (m}^2)} \]

Co-morbidities

Co-morbidity described as the simultaneous presence of two or more morbid conditions or diseases in the same woman that may complicate a woman’s condition and treatment requirements.

GP Anaesthetist

For the purposes of these standards, a General Practitioner who is credentialed to provide anaesthetics in accordance with the criteria determined by the Joint Consultative Committee on Anaesthesia.
Definitions (continued)

**GP Obstetrician (three categories)**

1) A General Practitioner who is privileged to provide obstetric shared care in accordance with the SA GP Shared Care Protocols.

2) A General Practitioner with a Diploma Royal Australia and New Zealand College Obstetricians and Gynaecologists privileged to provide care for ‘low risk’ women.

3) A General Practitioner with a Diploma Royal Australia and New Zealand College Obstetricians and Gynaecologists – Advanced, privileged to provide care for ‘defined risk’ women.

**Overweight**

Generally defined as having more body fat than is optimally healthy and is determined as a BMI 25 – 29.9kg/m² or greater.

**Obese**

Obese is a medical condition in which excess body fat has accumulated to the extent that it may have an adverse effect on health, leading to reduced life expectancy and defined as BMI of 30kg/m².

<table>
<thead>
<tr>
<th>Classification</th>
<th>BMI: kg/m²</th>
<th>Risk of Co-morbidities</th>
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<tr>
<td>Normal</td>
<td>18.5 – 24.9</td>
<td>Average</td>
</tr>
<tr>
<td>Overweight</td>
<td>25 – 29.9</td>
<td>Increased</td>
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<tr>
<td>Obese Class 1</td>
<td>30 – 34.9</td>
<td>Moderate</td>
</tr>
<tr>
<td>Obese Class 2</td>
<td>35 – 39.9</td>
<td>Severe</td>
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<tr>
<td>Obese Class 3</td>
<td>≥ 40</td>
<td>Very severe</td>
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**Specialist Anaesthetist**

A medical practitioner registered with the Australian Health Practitioners Regulatory Authority as a Specialist Anaesthetist.

**Specialist Obstetrician**

Specialist Obstetrician is recognised in Australia by the Royal Australian and New Zealand College of Obstetricians and Gynaecologists and is registered with the Australian Health Practitioners Regulatory Authority as a Specialist Obstetrician.

**Thrombo-embolic disease**

A condition in which a blood vessel is obstructed by an embolus carried in the bloodstream from the site of formation.
8. Associated Directives / Guidelines & Resources


9. References


Definitions (continued)


Bibliography

- Dodd J M, Briley A L; Managing obesity in pregnancy – An obstetric and midwifery perspective; Midwifery journal homepage: March 2017; www.elsevier.com
10. Acknowledgements

This document was first produced in 1987, with subsequent revisions in 1995, 1999, 2010, 2015 facilitated by the relevant state-wide maternal and neonatal executive committee with assistance by lead clinicians from across South Australian.

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<th>Position and Affiliation</th>
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<tbody>
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## 11. Document Ownership & History

Document developed by: SA Maternal, Neonatal & Gynaecology Community of Practice

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