

# Colac Area Health Regional Operating Model for Maternity & Newborn Services



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## TABLE OF CONTENTS

<b>Purpose</b> .....	<b>5</b>
<b>Introduction</b> .....	<b>11</b>
<b>Level 5 Service Capability</b> .....	<b>12</b>
Normal risk criteria for antenatal care and birthing .....	
Intermediate risk criteria for antenatal care and birthing.....	
Time critical high risk criteria.....	
<b>Referral pathways</b> .....	<b>15</b>
Return transfer .....	
Exclusion criteria for return transfer.....	
<b>Koori Maternity Service Program</b> .....	<b>17</b>
<b>Workforce requirements</b> .....	<b>19</b>
Registration/endorsements .....	
Continuing professional development .....	
Clinical supervision .....	
Competencies and skills .....	
<b>Performance Measures</b> .....	<b>20</b>
Victorian Maternity Services Performance Indicators .....	
Clinical Governance .....	
The Maternity and Newborn Clinical Network .....	
Internal audit .....	
Morbidity and Mortality review .....	
<b>Appendix 1 – Maternity Capability</b> .....	<b>22</b>
<b>Appendix 2 – Neonatal Capability</b> .....	<b>23</b>
<b>Appendix 3 – Guidelines for consultation and referral</b> .....	<b>24</b>
<b>Appendix 4 - PIPER - Paediatric Infant Perinatal Emergency Retrieval</b> .....	<b>31</b>
<b>Appendix 5 – Training programs endorsed by the professional colleges</b> .....	<b>32</b>
<b>Reference List</b> .....	<b>34</b>



# Barwon South West Regional Operating Model for Maternity & Newborn Services Guidelines

## Purpose

The Regional Operating Model has been developed in consultation with DHHS and the nine Maternity and Newborn Services within the Barwon South West Region (BSW) to strengthen networks and formal linkages to improve communication, patient care and outcomes for women across the region.

The Regional Operating Model will inform BSW maternity and newborn capacity and increase regional self-sufficiency through formalised communications, provision of tools and resources to support information sharing, collaborative consultation, escalation and referral pathways.

Through the strengthening of established regional partnerships within BSW and the collaboration of local services, care close to home will be preserved for as many women and families as possible. This operating model will ensure that only those requiring the most complex and specialised care will need to travel outside of the BSW to tertiary healthcare in Melbourne.

**Map 1 – Barwon South West**



The BSW region has a population of more than 400,000 People & in 2018-2019 3676 babies were born throughout the region.

## Service Capability Framework

The BSW ROM has been developed upon the foundation of the [Capability frameworks for Victorian maternity and newborn services](#) (Department of Health and Human Services 2019).

The *Capability frameworks for Victorian maternity and newborn services (2019)* outlines key requirements for the provision of safe and high-quality maternity and newborn care for Victorian public hospitals of all levels. It also outlines the consultation, referral and transfer processes across the six levels of care.

### *The Victorian system of maternity and newborn care Capability frameworks for Victorian maternity and newborn services 2019*



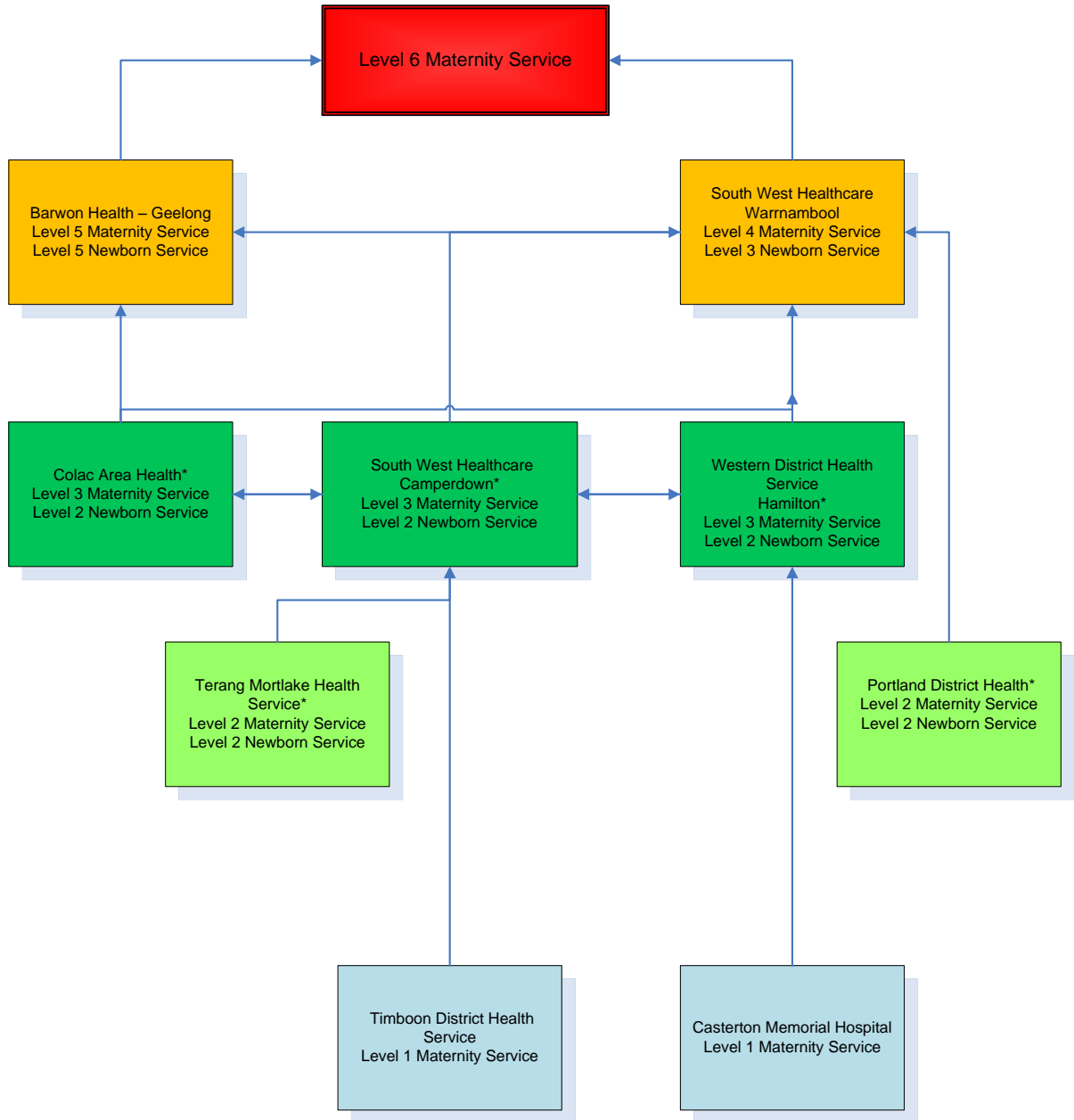
The maternity and newborn frameworks are designed to be utilised as ‘companion’ documents providing:

- Support for clinicians to partner with women and families to plan for their care through pregnancy, birth and in the postnatal period
- Assist health services to make informed decisions about the resources, partnerships and protocols required to manage different complexities of care
- Enable a transparent approach to planning and service development at a local level, taking into account community needs
- Support health service regions and the department to plan for and manage the maternity and newborn service system.

Barwon South West	Maternity capability level	Newborn capability level	Capability criteria	Contact
Barwon Health	5	5	Ability to deliver high risk obstetric care from 31 weeks, including Caesarean Section.	03 4215 0000
South West Healthcare - Warrnambool	4	3	Ability to deliver high risk obstetric care from 34 weeks, including Caesarean Section.	03 5563 1666
Western District Health Service - Hamilton	3	2	Low Risk/ Normal Birth from 37 weeks	03 5551 8222
Colac Area Health	3	2	Low Risk/ Normal Birth from 37-42 weeks	03 5232 5100
South West Healthcare - Camperdown	3	2	Low Risk/ Normal Birth from 37 weeks	03 5593 7300
Portland District Health	2	2	Low Risk/ Normal Birth from 37-42 weeks	03 5521 0333
Terang & Mortlake	2	2	Low Risk/ Normal Birth from 37 -42 weeks	03 5592 0222
Casterton Memorial Hospital	1	1	Non Birthing Antenatal & Postnatal care can be provided	03 5554 2555
Timboon District Health service	1	1	Non Birthing Antenatal & Postnatal care can be provided	03 5558 6000

Capability across the continuum of care from pregnancy through to the postnatal period and newborn care is outlined at each level. The workforce, infrastructure, equipment, clinical support services and governance requirements must be met at all times to maintain service capability.

## BSW ROM Maternity & Newborn Services Flowchart



\* Maternity service on bypass can refer low-risk birthing women to a choice of services with the same or higher capability within the BSW region



### Traffic Light Consultation system (TLCs)

A highly visual, colour coded assessment tool used to assess clinical risk, to flag escalation potential and to facilitate appropriate Health Service selection, within the guidelines of the capability frameworks for Victorian maternity and newborn services.

<b>GREEN</b>	<b>ACCEPT – Suitable for collaborative care</b>
<b>AMBER</b>	<b>CONSULT – May be suitable for antenatal care and birthing. Requires consultation with colleagues and consider consultation with HIGHER Level service</b>
<b>RED</b>	<b>REFER – Not suitable for care Requires referral and/or transfer to a HIGHER Level service</b>

All women should be managed and considered on an individual basis to ensure women-centred care and avoidance with grouping women together into categories of risk. It is acknowledged that one woman can be identified to belong in separate levels of risk in all stages of the childbearing continuum. Therefore, early identification and escalation is critical to successfully providing safe and appropriate maternity care.

Regardless of risk and planned hospital of birth, it is recommended that all women be 'booked into' their local maternity health service in the early antenatal period. These women will require an appropriate management plan be put into place to continually monitor, assess and manage the identified risk.

This traffic light assessment tool has the potential to see women progress from green, to amber to red during their confinement and to likewise be 'stepped down' from red to amber to green. Pregnancy and birth are not without risk and all women require diligent clinician care to ensure appropriate care and service provision is available for both the woman, her baby and her family.

See *Table 5* for further description of the TLC's.

**Table 5 – Details of Traffic Light Consultation system**

<b>GREEN - ACCEPT</b>
<p>Normal risk pregnancies are considered ‘Green’ and are suitable for low risk models of care. Women identified to be normal risk at booking, will be offered continuity of care throughout the continuum of pregnancy in an agreed model of a care depending on the specific care models available at the given health service. All care should be provided within the clinician’s professional scope of practice and within the Health Service’s policies and procedures. Appropriate use of the traffic light tool should occur if a woman’s pregnancy risk alters from normal risk and requires escalation.</p>
<b>AMBER - CONSULT</b>
<p>Pregnancies that are ‘Amber’ are not suitable for midwifery-led shared care, but may still be suitable to birth at the booking Health Service. These women are flagged as Amber for various reasons and will require increased monitoring during their confinement. Increased monitoring may include additional antenatal reviews and testing, transfer to Consultant-led care models and consultation with Medical Specialists. Antenatal women requiring consultation or birthing at a higher level facility, may be suitable for shared care between the referring health service and the appropriate maternity health service. Consultation should be clearly documented in the woman’s clinical record including an individualised care plan and any change or transfer of care responsibility</p>
<b>RED - REFER</b>
<p>‘Red’ categorised women or infants are identified as high risk by the referring health service and are considered unsuitable to remain under their current care giver and/or health service. Referral to a higher level maternity or neonatal service is required. These women may be identified as suitable for antenatal shared-care between current and higher level maternity services.</p> <p>Women who present in the ‘refer’ criteria that require time critical management should have early consultation with a Paediatric Consultant, Paediatric Infant Perinatal Emergency Retrieval (PIPER) or Ambulance Victoria.</p>

## Introduction

### **Level 3 Maternity & Level 2 Newborn: Colac Area Health (CAH)**

CAH currently provides pregnancy, birthing and postnatal care to women and their families in the Barwon South West region

CAH manages approximately 135 pregnancies annually.

GP/Obstetricians work in partnership with the midwifery team to provide maternity care to women throughout the birth continuum. The maternity services team performs a thorough risk assessment of women throughout the pregnancy continuum in order to identify women who require referral to a Level 4-5 within the BSW region or who require referral to a level 6 tertiary services located in Melbourne for care. Return transfer is encouraged postnatally to ensure women are closer to their significant others, support systems and their familiar care providers to optimise their transition to home. Childbirth education classes, domiciliary care, breastfeeding support services are provided by midwives and lactation consultants at CAH

The Barwon South West Regional Operating Model details the agreed set of guidelines that the community, clinicians, service providers and managers can use to work together to ensure safe, evidence based maternity and newborn care for women who live in the region; ensuring women receive the right care, in the right place at the right time.

This document is to be used in conjunction with the current policies, clinical practice guidelines and performance indicators within the clinical governance framework within each Maternity & Newborn Service.

## Level 3 Maternity & Level 2 Newborn

### Service Capability

The Capability Framework for Victorian Maternity and Newborn Services (2019) document outlines the role of each maternity and newborn service in metropolitan, regional and rural areas. It describes the services required at each level of care and the relationships each service has with other maternity and newborn services within the context of statewide services.

CAH provides level 3 maternity and level 2 newborn services and is aligned with the capability framework to ensure appropriate care, identification or risk and timely referral of women and newborns who have developed complications during the antenatal and perinatal period.

CAH provides maternity services to women who are 'normal risk'. Women defined as 'Intermediate & high risk' and requiring time critical management and newborns who require special care nursery management SCN and NICU will be referred to an appropriate Level 4/5/6 maternity hospital.

CAH are able to take referrals from L1 – 2 Maternity Hospitals in the BSW region by agreement. All risk is considered with an appropriate management plan in place to continually monitor, assess and manage the identified risk. Antenatal care is delivered in a collaborative model between the midwifery team and the GP Obstetricians. Women who have remained within the antenatal criteria for 'normal risk' will be deemed suitable for midwifery care during labour and birth at CAH.

### Normal risk criteria for antenatal care and birthing

<b>At Booking/antenatal</b>
• Cephalic presentation
• Singleton pregnancy
• Longitudinal lie
• Regular antenatal attendance
• Multiparous with a previous uncomplicated pregnancy and birth
• Primagravida with no identified risk factors at booking
• Body Mass Index <40
• Maternal age 17 years – 39 years and 11 months EDB
• Group B streptococcus colonisation
• Rhesus negative blood group
• Mental health disorders not requiring GP/advanced care or medication
<b>During Labour and Birth</b>
• Normal progress of labour
• Normal fetal heart rate pattern
• Booking Body mass index <40
• Spontaneous labour at 37 weeks – 40+10 weeks gestation

### Intermediate criteria for antenatal care and birthing

The following are 'risk' factors which require consultation with either the GP Obstetrician & / or obstetrician, anaesthetists and Maternity Services unit manager as appropriate to assess and consider suitability for birthing at CAH. Full Level 3 capability with obstetric capacity is

required at the time of presentation in labour. CAH have established referral pathways in the event of non-availability of surgical services (*refer to transfer of care policies and procedures*).

CAH will receive transfers from Level 1-2 services after advice regarding inability of services unable to fulfil its obligations under their specific level capability framework

### **Intermediate risk criteria capacity**

Shared antenatal care with Higher Level Facility such as SWH-W, BH or Level 6. if deemed suitable by consultant obstetrician (birthing at higher level facility)
Elective repeat caesarean section
Induction of labour post term
Induction of labour at term for pre-labour rupture of membranes
Augmentation of labour for failure to progress including artificial rupture of membranes, oxytocin infusion
Late presentation for antenatal care (if no antenatal care elsewhere)
Time critical patients where transfer is not available/possible and emergency caesarean required

### **Time critical high risk criteria**

Presentations which require time critical management require early consultation with the paediatric consultant or Paediatric Infant Perinatal Emergency Retrieval (PIPER) service and management is dependent on availability of antenatal and neonatal services at appropriate Level 4, 5 or 6 maternity facilities and the availability of surgical and obstetric services.

### **High risk criteria requiring time critical management**

High risk presentations with imminent delivery are special circumstances where high risk delivery will need to be managed at the presenting hospital ( consultation with PIPER and NETS required)
Women who develop complications antepartum who require inpatient management are reviewed by the Obstetrician/GPObs/Obstetrician Registrar in the first instance who will then consult with PIPER to ensure transfer to appropriate facility – dependent upon the complication
Women who develop complications postpartum which require specialist's obstetrician care require transfer to a Level 4-5-6 facility via Ambulance Victoria (AV) in consultation with PIPER. Transfer is facilitated by PIPER, the Bed Manager and unit registrar at the transferring / or receiving hospital and the Obstetrician/midwife.
Infants who develop complications at birth who require admission to a Special Care Nursery Level 5 or Neonatal Intensive Care Unit will require timely Obstetrician and Paediatric review and consultation with PIPER with aim for timely transfer

### **Other services provided by CAH**

- Childbirth education classes
- Breastfeeding support by midwives and / or lactation service
- Dietetics
- Referral to perinatal emotional health service within the BSW region
- Referral to allied health practitioners such as physiotherapists diabetes educator and exercise physiologist
- Social work and counselling
- Aboriginal liaison officer and Koori maternity services

## **REFERRAL PATHWAYS**

### **Antenatal**

Barwon Health has an established pathway for referral to level 6 maternity and NICU services. In the antenatal period women, who require advanced pregnancy and birth care are routinely referred to a level 6 tertiary services located in Melbourne for care; or in negotiation with another relevant health facility depending on the preferred location of the woman. The complete antenatal history, along with initial referral letter and reason for transfer, is provided to the receiving antenatal clinic. The woman is contacted by the receiving facility to arrange a timely and appropriate appointment

SWH-W has an established pathway for referral to level 5 & 6 maternity, SCN and NICU services. In the antenatal period women who require advanced pregnancy and birth care are routinely referred to BH who are a level 5, to a level 6 tertiary services located in Melbourne for care; or in negotiation with another relevant health facility depending on the preferred location of the woman. The complete antenatal history, along with initial referral letter and reason for transfer, is provided to the receiving antenatal clinic. The woman is contacted by the receiving facility to arrange a timely and appropriate appointment.

All L1-L3 services WDHS, CAH, SWH-C, PDH TMHS, CMH & TDH have an established pathway for referral to Level 4, 5 & 6 maternity, SCN and NICU services. In the antenatal period women who require advanced pregnancy and birth care are routinely referred to SWH-W who are a Level 4, BH who are a Level 5, to a level 6 tertiary services located in Melbourne for care; or in negotiation with another relevant health facility depending on the preferred location of the woman. The complete antenatal history, along with initial referral letter and reason for transfer, is provided to the receiving antenatal clinic. The woman is contacted by the receiving facility to arrange a timely and appropriate appointment.

### **Inpatient**

Antenatal inpatient emergency referrals are managed by the Paediatric Infant Perinatal Emergency Retrieval (PIPER) service in the first instance. The procedure is as follows:

1. The obstetrician/GPObs or midwife contacts PIPER on 1300 137 650
2. The PIPER Obstetrician/coordinator determines the level of care required and the receiving hospital.
3. The PIPER coordinator will contact the nominated bed manager of the relevant service to confirm bed availability and inform the coordination centre of the identity of the receiving unit.
4. The transfer of clinical information will then be facilitated by linking the referring healthcare professional to the receiving obstetric registrar.
5. Transfer by ambulance is arranged by the transferring hospital at the direction of PIPER
6. Maternity staff then ensure appropriate clinical handover to the receiving midwife including verbal handover by phone, provision of copies of inpatient documentation and completion of the local antenatal transfer process

Semi elective non-emergency transfers are arranged directly between the health service and the level 6 maternity as appropriate.

### **Referral guidelines**

All L1-L5 services have developed referral pathways based on identified 'risk' criteria and the level of clinician required. Referral is based on the appropriate level of maternity care provider.

If the woman develops risk factors they move away from the ‘normal or intermediate’ to ‘high risk’ pathway as described above and are either assessed by the Obstetrician/GPObs or are referred directly for pregnancy or birthing care. Care providers must refer to “Guidelines for Consultation and Referral” for further details (see Appendix 3).

## **Return Transfer**

Women who have birthed at maternity services outside their local area may be transferred back for their postnatal care and extended post-natal care (EPC). Return transfer is facilitated by the inpatient nurse unit manager/associate nurse unit manager to ensure appropriate staffing levels and bed availability can be achieved. The on-call obstetrician /GP Obs must also be prepared to accept the transfer. EPC will also be provided by the local maternity service on discharge.

TDHS encourages women who have birthed at maternity services outside their local area to return to their own home on discharge as per level one criteria. Follow-up extended postnatal care is supported by the community midwife and midwife team. Under exceptional circumstances, an admission to TDHS will be considered following discussion held regarding reasons for admission with all involved staff and approval by the Director of Clinical Services.

Return transfer may occur as early as four hours postpartum, if appropriate. The referring facility must assess and be responsible for the mode of transport; which is usually in the woman’s private car.

## **Exclusion Criteria for return transfer: This criteria is a guide only and each case will be considered according to individual needs.**

<b>Maternal</b>	<b>Neonatal</b>
<ul style="list-style-type: none"> <li>• Febrile / suspected maternal sepsis</li> <li>• Uncontrolled persistent hypertension / eclampsia</li> <li>• Haemorrhage &gt; 2000mls &amp; complications</li> <li>• Low haemoglobin (Hb) of 8g/L and/or symptomatic</li> <li>• Thrombophlebitis or thromboembolism (&amp; complications)</li> <li>• Pre-existing medical conditions requiring treatment (e.g. diabetes)</li> <li>• Urinary retention requiring complex medical intervention</li> <li>• Acute psychological condition</li> </ul>	<ul style="list-style-type: none"> <li>• APGAR &lt; 7 at 5 mins &amp; requiring ongoing additional monitoring</li> <li>• &lt;37 weeks gestational age (may be considered depending on other risk factors)</li> <li>• Infant weight &lt;2500g (may be considered depending on other risk factors)</li> <li>• Jaundice, 24 hours or suspected pathological jaundice after 24 hours</li> <li>• Unstable blood sugar levels</li> <li>• Birth injury/trauma requiring monitoring and/or investigation</li> <li>• Confirmed or suspected sepsis</li> <li>• Excessive moulding and/or cephalhaematoma</li> <li>• Abnormal findings on physical examination</li> <li>• Excessive bruising, abrasions, unusual pigmentation and/or lesions</li> <li>• Temperature instability</li> <li>• Congenital abnormalities</li> <li>• Abnormal heart rate pattern</li> </ul>



## **Koori Maternity Service Program**

The Koori Maternity Service (KMS) program provides Aboriginal and Torres Strait Islander women, babies and families with flexible, holistic and culturally safe care and support during pregnancy, labour, birth and the postnatal period.

Delivered by midwives, Aboriginal health workers and Aboriginal hospital liaison officers, KMS are designed for Aboriginal women and families and women having Aboriginal babies. KMS embrace an Aboriginal understanding of health that extends beyond physical wellbeing to include the social, emotional, spiritual and cultural wellbeing of an individual and community.

Koori Maternity Services has been developed in partnership between the Department of Health and the Victorian Aboriginal Community Controlled Health Organisation (VACCHO).

### **Koori Maternity Services work with:**

Health services

Aboriginal community controlled organisations

Early childhood services

Community support services

### **KMS program objectives and aims**

The objective of KMS is to improve pregnancy journeys through:

- Increasing access to, and participation in, antenatal services, birth and postnatal support.
- Facilitating relationships between women and birthing hospitals.

KMS also strives to improve health outcomes and specifically aims to:

- Optimise the health and wellbeing of women and their babies.
- Identify and manage maternal and fetal risk factors, particularly early in pregnancy.
- Reduce perinatal morbidity and mortality, including incidence of preterm birth and low birth weight.

### **Outcomes for Aboriginal women and their families**

The goal of the Koori Maternity Services is to ensure that Aboriginal women and families receive culturally safe and high-quality pregnancy care, with the following outcome intentions:

- More Aboriginal women accessing antenatal care earlier in their pregnancy.
- Fewer Aboriginal women smoking during pregnancy.
- Fewer Aboriginal babies being born prematurely.
- Fewer Aboriginal babies die during pregnancy or soon after birth.

## **Aboriginal Cultural Safety and principles of KMS service delivery**

### **What is cultural safety?**

Cultural safety is about providing quality service that fits within the cultural values and norms of the person accessing the service that may differ from your own and/or the dominant culture.

### **Aboriginal cultural and evidence-based practice underpins KMS work**

- Cultural competence is an essential component of clinical competence and underpins effective communication and cultural safety.
- Aboriginal culture is central to the delivery of KMS. The KMS workforce has the expertise, knowledge and experience to tailor care to the needs of local Aboriginal women, babies and families.
- KMS are evidence-based and reflect best practice standards.

### **Aboriginal women, babies and families are the centre of care**

- Strong and trusting relationships built on mutual respect are central to providing culturally safe and responsive care.
- Time is taken to build trust with Aboriginal women and families to ensure that care provided reflects Aboriginal cultural values and connection to kin, community and country.
- Care and support provided reflects the holistic health and wellbeing needs and expectations of each woman and her family.

### **Early support and access to care improves outcomes**

- Timely access to services and support early in pregnancy can improve health and wellbeing outcomes for Aboriginal women and babies.
- Flexible, inclusive and opportunistic maternity and newborn care builds service equity and improves outcomes.

### **KMS teams work collaboratively to improve outcomes**

- KMS work in partnership with women, families and other service providers.
- KMS ensure that Aboriginal women, babies and families with complex care needs are appropriately referred to specialist services provided by hospitals and other community-based services while remaining an integral part of the care team.

## **Workforce requirements**

### **Registration/endorsements**

Midwifery staff must have a current registration as a Registered Midwife with the Australian Health Practitioners Regulation Agency (AHPRA).

Medical staff must be granted 'Visiting Rights with Obstetric Privileges' via the Medical Credentialing Committee prior to practicing obstetrics within BSW.

### **Continuing professional development**

The BSW region has a commitment to support the continuing professional development (CPD) needs of the midwifery workforce to maintain quality and safety of service delivery. Midwives may access onsite programs and are encouraged to attend regional and state programs and forums. Midwives may access study leave entitlements according to organisational guidelines and current nursing and midwifery EBA and are encouraged to discuss their professional development needs with their manager as part of the annual performance development review.

It is preferred midwives have a minimum of one-year post-graduate experience (degree or direct entry graduates) on employment, however consideration may be given to supportive programs for new graduates according to workforce demands and individual needs. Collaborative arrangements are in place for postgraduate midwifery students to access other maternity services sites across the region to complement their experience.

### **Clinical supervision**

Midwifery students must always work under the direct supervision of a midwife regardless of clinical area. In the birthing suite, midwifery students who are acting as the accoucher are working in a supernumerary capacity and the minimum staffing ratios for midwives must be maintained.

Clinical supervision to obtain clinical competencies is undertaken by midwives with the appropriate experience and skill in the competency.

### **Competencies and skills**

Organisational competency requirements for midwives are detailed in Appendix 4. Midwives have a professional responsibility to maintain their competence in the areas in which they practice regardless of the organisational requirements. Midwives are expected to work within their scope of practice and refer care to an appropriate clinician when required.

## **Performance Measures**

### **Victorian Perinatal Services Performance Indicators**

The goal of the Victorian Maternity Services Performance Indicators is to facilitate improved outcomes for women and babies by providing a focus for multidisciplinary performance improvement measures and quality activities for hospitals, program manager and clinicians.

All BSW region maternity and newborn services as a public Victorian birthing service is required to report against the twelve key maternity performance indicators annually. The indicators are derived from data reported to the Department of Health & Human Services, Victorian Perinatal Data Collection and the Victorian Admitted Episodes Dataset.

BSW region uses the annual report to:

- Track the organisations performance trends
- Compare results with services of a similar profile
- Identify priority areas for future focus
- Regularly review and plan for performance improvement within the continuous quality framework
- Evaluate improvement programs and provide feedback to relevant stakeholders

### **Clinical governance**

All policies, protocols and clinical practice guidelines are processed and managed by an internal clinical governance framework with appropriate stakeholder engagement and alignment with best practice documents and current evidence based peer reviewed literature.

### **The Maternity and Newborn Clinical Network**

BSW region receives regular communication and information from the Maternity and Newborn Clinical Network who develop statewide policy, drive priority projects to support quality and safety of care and recommendations to support quality and safety of care regarding specific aspects of maternity and newborn care. Where outlier data is identified internally against recommendations, internal strategies are developed to review and improve care delivery.

### **Internal audit**

BSW region maternity services participate in consumer satisfaction surveys, known as the Victorian Health Care Experience Survey (VHES), which help to identify what is working well within the unit and areas for improvement. Survey results provide valuable feedback for the maternity staff and the management team.

Internal auditing throughout BSW maternity and newborn services also occurs individually regarding key systems and processes for providing maternity care. These include a range of activities with maternity services staff & consumers such as but not limited to 'knowing how we are going boards', quality improvement activities, internal monthly audits of CTGs, case reviews, review of Riskman incidents including feedback to staff, consumer forums, formal evaluation of new projects, reporting within the annual quality report.

**Morbidity and Mortality review**

Obstetric morbidity and mortality events are reviewed through the Maternity Morbidity and Mortality Committee, which meets quarterly. An independent external consultant obstetrician attends the meetings and through clinical case studies and reflective practice a learning environment for medical and midwifery staff contributes to continuous quality improvement in the region's maternity and newborn services. This model also includes Ambulance Victoria personnel.

## APPENDIX 1

# Maternity capability levels

Department of Health The Capability frameworks for Victorian maternity and newborn services (2019) <https://www2.health.vic.gov.au/hospitals-and-health-services/patient-care/perinatal-reproductive/maternity-newborn-services/maternity-newborn-care>

## APPENDIX 2

# Newborn capability levels

Department of Health The Capability frameworks for Victorian maternity and newborn services (2019) <https://www2.health.vic.gov.au/hospitals-and-health-services/patient-care/perinatal-reproductive/maternity-newborn-services/maternity-newborn-care>

### APPENDIX 3

#### Guidelines for Consultation and Referral Procedure

#### **A) SUMMARY OF CODES**

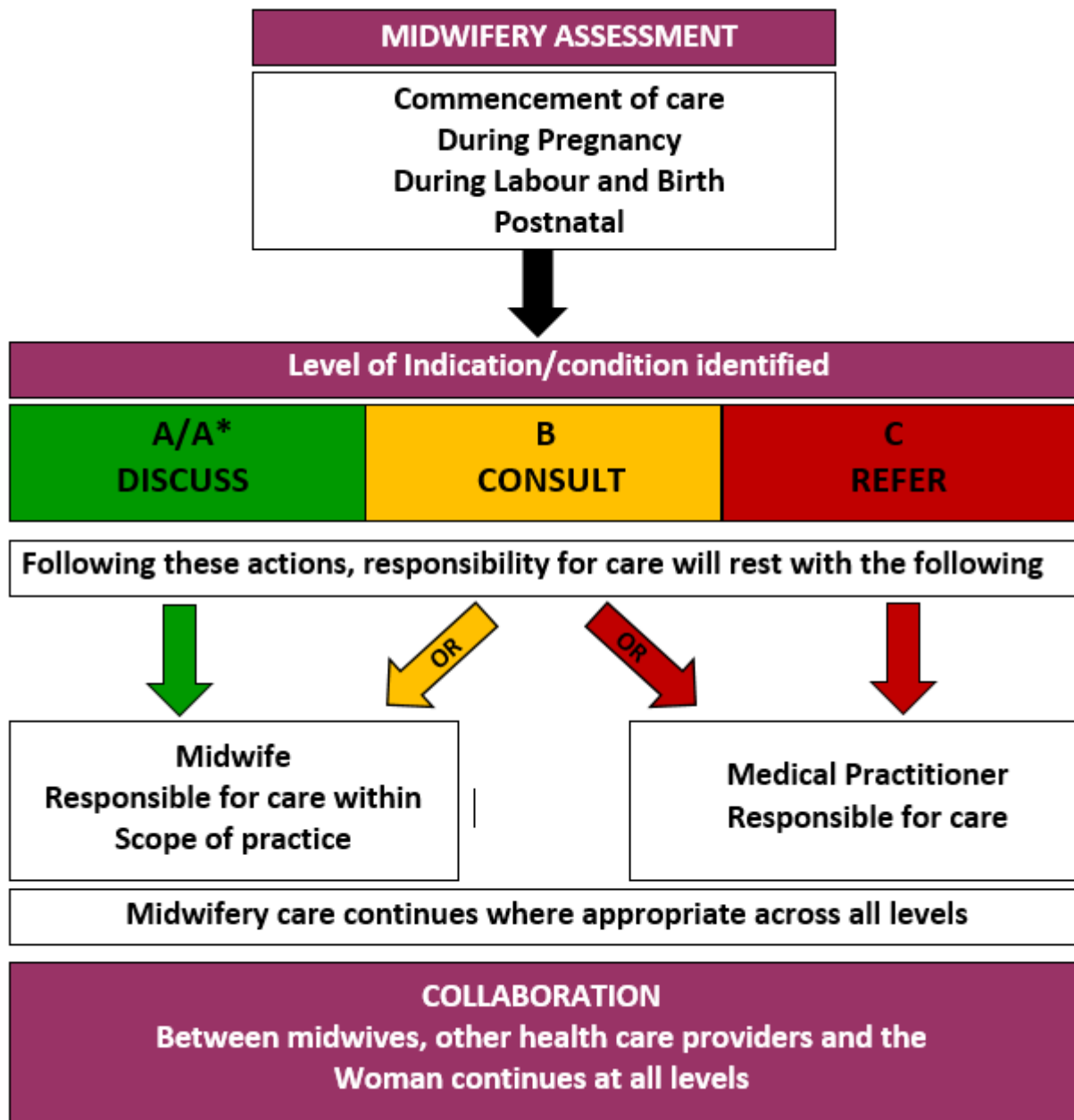
(From ACM National Guidelines for consultation and Referral 2014)

Code	Description	Care provider with primary responsibility
<b>DISCUSS (GREEN)</b>		
<b>A/A*</b>	A discussion will be initiated with another health care provider to plan care.	Midwife and/or medical practitioner or other health care provider.
<b>CONSULT (AMBER)</b>		
<b>B</b>	Evaluation involving both primary and secondary care needs. The individual situation of the woman will be evaluated and agreements will be made about the responsibility for maternity care.	Midwife and/or medical practitioner or other health care provider
<b>REFER (RED)</b>		
<b>C</b>	This is a situation requiring medical care at a secondary or tertiary level for as long as the situation exists. The request for referral will be made in writing.  Alterations in care will be communicated in writing to the midwife.	Medical practitioner (for secondary or tertiary care).  Where appropriate the midwife continues to provide midwifery care.



## B) – HOW TO USE

(From ACM National Guidelines for consultation and Referral 2014)



**These guidelines for referral have been adapted from:**

Australian College of Midwives (2014) *National Midwifery Guidelines for Consultation and Referral* (2nd ed. ACM: Deakin ACT and Eastern Health (2014) *Expected Pathways of Care for Pregnant Women*. Version 3.2

## C) DEVELOPED DURING PREGNANCY

(From ACM National Guidelines for consultation and Referral 2014)

### DISCUSS (GREEN)

- A Symphysis pubis dysfunction (pelvic instability)
- A/B Haematological - Rhesus negative requiring Anti D
- A/B Infectious diseases - Human Papilloma Virus (HPV)
- A/B Renal function disorders - Urinary tract infections
- A/B Vaginal Blood loss - Recurring loss prior to 12 weeks
- A\*/B Asthma
- A\*/B Infectious diseases - Chlamydia
- A\*/B Infectious diseases - Genital Herpes - Recurrent (Consider antivirals to begin at 36 weeks)

### CONSULT (AMBER)

- B Adoption - intended
- B Current or previous child protection concerns
- B Diabetes mellitus - Gestational diabetes diet controlled
- B Fetal Size/date discrepancy - Polyhydramnios/Oligohydramnios
- B Fetal Size/date discrepancy - Small for dates or large for dates
- B Fibroids
- B Gastro-intestinal and Hepatobiliary - Acute Hepatitis (any cause) or jaundice
- B Gastro-intestinal and Hepatobiliary - Cholecystitis or Biliary Colic
- B Gastro-intestinal and Hepatobiliary - Hepatitis B or C positive serology (HBsAg+)
- B Gastro-intestinal and Hepatobiliary - Inflammatory Bowel Disease including ulcerative colitis and Crohn's disease
- B Gastro-intestinal and Hepatobiliary - Other Acute Gastrointestinal or Hepatobiliary presentation
- B Haematological - Anaemia Hb < 90 g/l
- B Haematological - Coagulation disorders
- B Haematological - Mean corpuscular volume (MCV) < 80
- B Hernia Nuclei Pulposi (slipped disc)
- B High head at term
- B Hyperemesis Gravidarum
- B Hypertension - Eclampsia
- B Hyperthyroidism
- B Infectious diseases - Gonorrhoea
- B Infectious diseases - Listeriosis
- B Infectious diseases - Rubella
- B Infectious diseases - Toxoplasmosis
- B No prior prenatal care (at full term)
- B Post-dates pregnancy Gestational age  $\geq 41$  completed weeks or 287 days
- B Reduced fetal movement in third trimester
- B Renal function disorders - Haematuria or Proteinuria ( $\geq 2+$ )
- B Thyroid disease - Hyperthyroidism
- B Thyroid disease - Hypothyroidism
- B Thyroid disease - Subclinical hypothyroidism
- B Uncertain duration of pregnancy by amenorrhoea >20 weeks
- B Vaginal Blood loss - At or after 12 weeks
- B Vaginal Blood loss - Potentially significant clinical presentations during pregnancy: e.g. Acute abdominal pain, palpitations, neurological symptoms, intractable headaches

## C) DEVELOPED DURING PREGNANCY continued

(From ACM National Guidelines for consultation and Referral 2014)

### REFER (RED)

- B/C Addison's Disease, Cushing's Disease or other endocrine disorder requiring treatment
- B/C Cervical weakness (Cervical dilation prior to 37 weeks and/or cervical-procedure)
- B/C Cervix cytology abnormalities
- B/C Diabetes mellitus - Gestational diabetes requiring insulin
- B/C Ectopic pregnancy
- B/C Fetal anomaly
- B/C Fetal death in utero
- B/C Gastro-intestinal and Hepatobiliary - Cholestasis
- B/C Haematological - Thrombosis or Thrombophilia (other than MTHFR mutation)
- B/C Infectious diseases - Genital Herpes - Primary Infection
- B/C Infectious diseases - Tuberculosis - Past History & Treated
- B/C Hypertension
- B/C Perinatal mental health issues - EDPS>12 OR positive response to Q10 self harm
- B/C Perinatal mental health issues - Mental health issue requiring medication
- B/C Preterm rupture of membranes
  - C Breech presentation (refer for ECV at 35 weeks)
  - C Haematological - Blood group incompatibility
  - C Haematological - Thrombocytopenia < 150 x 10<sup>9</sup> /L
  - C Hypertension - Chronic Hypertension is present in the preconception period or the first half of pregnancy. It may be essential where there is no apparent cause or secondary where the hypertension is associated with renal, renovascular, endocrine disorder or aortic coarctation. Diastolic pressure should be recorded as Point V Korotkoff (K5) (i.e. the point of disappearance of sounds)
  - C Hypertension - Gestational Hypertension: any hypertension after 20 weeks gestation
  - C Hypertension - Pre-eclampsia: BP of  $\geq 140/90$  and/or relative rise of  $> 30/15$ mmHg from BP at commencement of care
    - and any of**
    - C proteinuria  $> 0.3$ g/24 hours; or protein/creatinine ratio  $\geq 30$ mg/mmol or 2+ protein on dipstick testing
    - C Platelets  $< 150 \times 10^9/l$
    - C Abnormal renal or liver function
    - C Imminent eclampsia
  - C Hypertension - Any type with Proteinuria ( $\geq 2+$  or  $>0.3$ g/24hrs)
  - C Infectious diseases - Cytomegalovirus
  - C Infectious diseases - Genital Herpes - Late in pregnancy – active lesions
  - C Infectious diseases - HIV-infection
  - C Infectious diseases - Parvo virus infection
  - C Infectious diseases - Syphilis
  - C Infectious diseases - Tuberculosis - Active
  - C Infectious diseases - Varicella /Zoster virus infection
  - C Malpresentation/non cephalic presentation at full term
  - C Multiple pregnancy
  - C Perinatal mental health issues - EDPS  $>12$  OR positive response to Q10 self harm
  - C Perinatal mental health issues - Mental health issue requiring medication
  - C Placental indications - Placenta accreta
  - C Placental indications - Placenta praevia confirmed
  - C Placental indications - Placental abruption
  - C Placental indications - Vasa Praevia
  - C Post-term pregnancy ( $\geq 42$  completed weeks or 294 days)
  - C Preterm labour (threatened or actual) and birth
  - C Renal function disorders - Pyelitis
  - C Surgery during pregnancy

**D) DEVELOPED DURING LABOUR AND BIRTH**  
 (From ACM National Guidelines for consultation and Referral 2014)

DISCUSS (GREEN)	
<b>A</b>	GBS positive
<b>A</b>	Haemorrhage - Intrapartum Haemorrhage - Asymptomatic and / or <500 ml
<b>A</b>	Haemorrhage - Postpartum Haemorrhage - Asymptomatic and / or <500 ml
<b>A/B</b>	Pre-labour term rupture of membranes (PROM) > 18-24 hours
<b>A*/B</b>	Rupture of membranes - Rupture of membranes at term > 18 hrs
CONSULT (AMBER)	
<b>B</b>	Meconium stained liquor Prolonged 1st stage labour < 2cm in 4 hours (for nulliparae). Take into consideration descent & rotation of fetal head, and changes in strength, duration and frequency of contractions. Consider ease or difficulty of access and / or transfer to referral services, e.g. location.
<b>B</b>	Rupture of membranes - Rupture of membranes at term (not in labour) > 24 hrs
<b>B</b>	Suspicious fetal heart rate pattern
REFER (RED)	
<b>B/C</b>	Prolonged labour - Active 1st stage of labor commences at 4cm dilatation - Prolonged active 1st stage labour > Nulliparae; <0.5cm /hr or Multiparae: 1cm/hr. Take into consideration descent & rotation of fetal head, and changes in strength, duration and frequency of contractions. Consider ease or difficulty of access an/or transfer to referral services, e.g. location.
<b>B/C</b>	Prolonged labour - Prolonged 2nd stage labour > Multiparae; with an epidural: > 2 hours undulating > 1 hour of expulsive effort without descent or Without an epidural: > 1 hour without descent. Consider ease or difficulty of access and / or transfer to referral services, e.g. location.
<b>B/C</b>	Prolonged labour - Prolonged 2nd stage labour > Nulliparae; 2 hours without decent. Consider ease or difficulty of access and / or transfer to referral services, e.g. location.
<b>B/C</b>	Vital signs - Persistent deviation from normal: tachycardia, decreased urine output, hypertension, hypotension.
<b>C</b>	Breech presentation
<b>C</b>	Fetal death during labour
<b>C</b>	Genital Herpes active in late pregnancy or at onset of labour
<b>C</b>	Haemorrhage - Intrapartum Haemorrhage - Symptomatic and / or > 500 ml
<b>C</b>	Haemorrhage - Postpartum Haemorrhage - Symptomatic and / or > 500 ml
<b>C</b>	Hb < 9 g/l in labour
<b>C</b>	Hypertension - Eclampsia
<b>C</b>	Hypertension - Gestational
<b>C</b>	Hypertension - Pre-eclampsia
<b>C</b>	Maternal Collapse/Shock
<b>C</b>	Multiple pregnancy
<b>C</b>	Non-vertex presentation
<b>C</b>	Oxytocin Infusion for any indication
<b>C</b>	Pathological CTG
<b>C</b>	Placental abruption and / or praevia (suspected or confirmed)
<b>C</b>	Pre-labour preterm rupture of membranes (PPROM) before 37 weeks
<b>C</b>	Preterm labour < 37 weeks
<b>C</b>	Prolapsed cord or cord presentation
<b>C</b>	Regional Anaesthetic (epidural, spinal)
<b>C</b>	Retained placenta
<b>C</b>	Shoulder dystocia
<b>C</b>	Third or fourth degree perineal tear
<b>C</b>	Unengaged head in active labour in primipara
<b>C</b>	Uterine inversion
<b>C</b>	Uterine rupture
<b>C</b>	Vasa praevia
<b>C</b>	Vital Signs - Temperature 38 degrees or more on 2 consecutive readings at least an hour apart

## E) CLINICAL INDICATIONS POSTPARTUM - MOTHER

(From ACM National Guidelines for consultation and Referral 2014)

<b>DISCUSS (GREEN)</b>	
<b>A</b>	Postpartum Haemorrhage - Asymptomatic and / or <500 ml
<b>A*/B</b>	Suspected maternal infection
<b>CONSULT (AMBER)</b>	
<b>B</b>	Acute urinary retention
<b>B</b>	Current or previous child protection concerns
<b>B</b>	Serious psychological disturbance
<b>B</b>	Significant social isolation and lack of social support
<b>B</b>	Temperature over 38°C on more than one occasion
<b>REFER (RED)</b>	
<b>C</b>	Anorectal incontinence
<b>C</b>	Persistent hypertension
<b>C</b>	Postpartum eclampsia
<b>C</b>	Postpartum Haemorrhage - Symptomatic and / or > 500 ml
<b>C</b>	Thrombophlebitis or thromboembolism
<b>C</b>	Uterine prolapse
<b>C</b>	Vuval or paravaginal haematoma

## F) CLINICAL INDICATIONS POSTPARTUM - INFANT

(From ACM National Guidelines for consultation and Referral 2014)

<b>CONSULT (AMBER)</b>	
<b>A/B</b>	Failure to pass urine or meconium within 24 hours of birth
<b>B</b>	Abnormal cry
<b>B</b>	Abnormal findings on physical examination
<b>B</b>	Abnormal heart rate
<b>B</b>	Birth weight less than 2500 g
<b>B</b>	Current or previous child protection concerns
<b>B</b>	Dehydration (clinical) suspected or observed
<b>B</b>	Failure to pass urine or meconium within 36 hours of birth
<b>B</b>	Failure to thrive - Failure to regain birth weight in two weeks
<b>B</b>	Failure to thrive - Weight loss in the first week more than 10% of body weight
<b>B</b>	Infection of umbilical stump site
<b>B</b>	Jaundice after 24 hours suspected pathological
<b>B</b>	Jaundice in first 24 hours
<b>B</b>	Persistent abnormal respiratory rate and / or pattern
<b>B</b>	Persistent cyanosis or pallor
<b>B</b>	Temperature less than 36° C, unresponsive to therapy
<b>B</b>	Two vessels in umbilical cord
<b>A/B/C</b>	Feeding problems
<b>REFER (RED)</b>	
<b>B/C</b>	Birth injury/trauma requiring investigation - Excessive bruising, abrasions, unusual pigmentation and / or lesions
<b>B/C</b>	Birth injury/trauma requiring investigation - Excessive moulding and cephalhaematoma
<b>B/C</b>	Preterm < 37 weeks gestational age
<b>C</b>	Apgar less than 7 at 5 minutes
<b>C</b>	Congenital abnormalities, for example: cleft lip or palate, congenital dislocation of hip, ambiguous genitalia
<b>C</b>	Major congenital anomaly
<b>C</b>	Seizure activity, observed or suspected
<b>C</b>	Temperature instability
<b>C</b>	Temperature more than 37.4° C, axillary, unresponsive to non- pharmacological therapy
<b>C</b>	Vomiting: projectile, excessive, bloody, uncharacteristic for newborn

## APPENDIX 4



# **PIPER - Paediatric Infant Perinatal Emergency Retrieval**

Standard & Defined Transfer Process for Level 6 Maternity Bed Allocation for Time Critical and Urgent PIPER Perinatal Referrals <https://www.rch.org.au/piper/guidelines/#>




## APPENDIX 5

### Training programs endorsed by the professional colleges

(From Safer Care Victoria Maternity and newborn services user guide 2018)

Training program	Description	Click on the below for more information
<b>PRactical Obstetric Multi-Professional Training (PROMPT)</b>	PROMPT is an evidence-based multi-professional training package for obstetric emergencies. It is associated with direct improvements in perinatal outcomes and has been proven to improve knowledge, clinical skills and team working.	<a href="#">PRactical Obstetric Multi-Professional Training (PROMPT)</a> 
<b>Fetal Surveillance Education Program (FSEP)</b>	<p>The Royal College of Australian and New Zealand Obstetricians and Gynaecologists (RANZCOG) FSEP delivers fetal surveillance education and resources to maternity services across Australia based on the Intrapartum Fetal Surveillance Clinical Guideline.</p> <p>The course offers different modes of learning including the online Fetal Surveillance Education Program (OFSEP), with or without assessments, and a face-to-face training day with assessment.</p>	<a href="#">Fetal Surveillance Education Program (FSEP RANZCOG)</a> 
<b>K2MS™ Perinatal Training Programme (PTP)</b>	The Perinatal Training Programme (PTP) is an interactive computer e-learning tool covering a comprehensive array of topics in fetal monitoring and maternity crisis management.	<a href="#">K2MS™ Perinatal Training Programme (PTP)</a> 
<b>PIPER education</b>	<p>The PIPER neonatal education service, based at the Royal Children’s Hospital, provides leadership and continuing education for healthcare professionals involved in perinatal care including:</p> <ul style="list-style-type: none"> <li>• <a href="#">NeoResus</a>, First Response, Advanced Resuscitation and Facilitator workshops for newborn resuscitation:</li> <li>• The Continuing Education Program in Newborn Nursing Care (CEPNNC).</li> <li>• Outreach education sessions and study days on topics nominated by level 1 or level 2 host hospital staff.</li> <li>• Education sessions for university students undertaking midwifery, neonatal nursing and paramedic training.</li> <li>• A consultancy service regarding equipment purchase, developing nursing and midwifery policies and formulating nursing and midwifery care standards for level 1 and level 2 hospitals.</li> </ul>	<a href="#">PIPER</a> 
<b>Basic Skills in Perinatal Mental Health</b>	<p>A free, accredited online training program providing an overview of the perinatal mental health disorders covered in the 2017 COPE Perinatal Mental Health Guideline including perinatal anxiety and depression, postpartum psychosis, and management of borderline personality disorder, schizophrenia and bipolar disorder in the perinatal period.</p> <p>The program covers key guideline recommendations surrounding the screening, assessment, management and treatment of these perinatal mental health disorders.</p>	<a href="#">Basic Skills in Perinatal Mental Health</a> 
<b>Maternity Services Education Program (MSEP)</b>	<p>The Women’s Maternity Services Education Program (MSEP) is a statewide clinical education program, delivering multidisciplinary education onsite in Victorian maternity services. MSEP delivers four key programs across Victoria and these include:</p> <p><b>Maternity and Newborn Emergencies (MANE) workshop</b></p> <p>The MANE program is a mandatory two-day program providing specialised maternity emergency education to maternity and newborn clinicians in level 2-4 maternity services throughout Victoria. The program focuses on key components of maternal and newborn emergencies using simulation and hands on clinical workstations. The program is tailored to each organisation’s particular education needs. All level 2-4 maternity services are expected to participate in this program. PIPER neonatal deliver the neonatal emergency portion of the MANE two-day program.</p> <p><b>Maternity update program</b></p> <p>The Maternity Update program is a one-day education program covering updates in antenatal, birth and postnatal care. This program uses clinical theory supported by</p>	<p><a href="#">Maternity and Newborn Emergencies (MANE) workshop</a> </p> <p><a href="#">Maternity Update program</a> </p>



Training program	Description	Click on the below for more information
	<p>practical workstations and is designed for staff refresher training or as an introduction to advanced maternity skillsets.</p> <p><b>Koori Maternity Services (KMS) Education Programs</b></p> <p>The Koori Maternity Services Maternity Update Program and Cultural safety in maternity and newborn emergencies (MANE) program are co-facilitated with VACCHO and focus on improving outcomes and maternity and newborn care for Aboriginal women, babies and families.</p> <p>See also <a href="#">culturally safe care</a> in this guide</p> <p><b>Emergency Birthing for Non-birthing and Level 1 Services Program</b></p> <p>One-day program focused on non-birthing services (level 1). Preparing non-maternity trained and practicing maternity clinicians with the knowledge and skills required to care for women presenting with an imminent birth within their hospital.</p>	<p><a href="#">Koori Maternity Services Education Program</a> </p> <p><a href="#">Cultural safety in maternity and newborn emergencies (MANE) program</a> </p> <p><a href="#">Non-birthing services program</a> </p>

### Professional development and competency for the rural workforce

Maintaining breadth and depth of maternity skills can be a challenge for small rural services. Strong consideration should be given to participation in short clinical rotations to larger regional maternity units within a region for upskilling and strengthening relationships.

### Maternity Connect Program (MCP)

The Maternity Connect Program supports midwives and nurses working in rural maternity services to maintain and enhance their skills and competence by facilitating placements in higher acuity services. Western Health operates the program on behalf of the Department.

## REFERENCE LIST

- Department of Health & Human Services: The Capability frameworks for Victorian maternity and newborn services (2019) <https://www2.health.vic.gov.au/hospitals-and-health-services/patient-care/perinatal-reproductive/maternity-newborn-services/maternity-newborn-care>
- Australian College of Midwives. (2018). National midwifery guidelines for consultation and referral (3rd Edition Issue 2. (2014). Retrieved October 23, 2018 from <https://www.midwives.org.au/resources/national-midwifery-guidelines-consultation-and-referral-3rd-edition-issue-2-2014>
- Safer Care Victoria Maternity and newborn services user guide (2018)
- PIPER - Paediatric Infant Perinatal Emergency Retrieval: Standard & Defined Transfer Process for Level 6 Maternity Bed Allocation for Time Critical and Urgent PIPER Perinatal Referrals (2019) <https://www.rch.org.au/piper/guidelines/#>
- Delivering high-quality healthcare Victorian clinical governance framework (2017). Accessed on 30/5/2018 from <https://www2.health.vic.gov.au>
- Safe Care Victoria (2017) Victorian Perinatal Services Performance Indicators (2015-2016)
- Kilmore & District Hospital – Maternity Services Capability Framework 2018
- Department of Health & Human Services: Koori maternity services guidelines <https://www2.health.vic.gov.au/hospitals-and-health-services/patient-care/perinatal-reproductive/maternity-newborn-services/aboriginal-maternity-services>