IN THE MATTER OF THE ROYAL COMMISSION INTO FAMILY VIOLENCE

ATTACHMENT FD-20 TO STATEMENT OF FRANCES MARIE DIVER

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Attachment FD-20

Department of Health

health

Capability framework

for Victorian maternity and newborn services

Victoria The Place To Be
A Victorian Government initiative

Accessibility

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Ministerial foreword

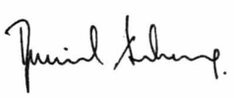
Maternity and newborn services are very important to the community, and a very important component of the health system. The Victorian Government is committed to providing high quality services for mothers and babies. There has been tremendous innovation and change in the years since the policy document *Future directions for Victoria's maternity services* was released in 2004.

The *Capability framework for maternity and newborn services* delineates 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 with other maternity and newborn services within the context of statewide services. Health services will use this framework to identify and demonstrate their role as a provider of safe and effective maternity and newborn services within Victoria's maternity system.

The framework addresses considerations of quality, safety and sustainability of maternity care provided across Victoria. It achieves this through outlining the skills required for services caring for the most complex cases and conversely by clearly describing the capability of smaller services to care for low risk mothers and babies close to home.

The framework has been developed through extensive consultation led by the Maternity and Newborn Clinical Network and an advisory committee consisting of clinicians and policy makers. I thank all those who have contributed to the development of this framework, either through providing comment during the consultation process or through their involvement with the advisory committee.

I am pleased to present the *Capability framework for maternity and newborn services*, which continues to articulate the government's vision for a sustainable, high quality maternity system.



The Hon. Daniel Andrews MP

Minister for Health

About this framework

The Victorian Government's vision for maternity services, outlined in the *Future directions for Victoria's maternity services*[1], was developed according to the following principles:

- ensuring safety and quality
- providing women with informed choice and greater control of their birthing experience
- achieving the right balance between primary level care and having access to appropriate levels of medical expertise when it is needed
- making the best use of the complementary skills of midwives, general practitioners and obstetricians
- enhancing a maternity team approach.

Many initiatives are currently underway to ensure health services are well placed to meet the needs of the women of Victoria and offer women choices and access to care based on evidence and best practice.

The current system of maternity and newborn services in Victoria involves 60 health services with dedicated maternity services. These include three hospitals with tertiary services, dealing with the most complex pregnancies and newborn care needs (and a fourth tertiary service dedicated to neonatal services). Other metropolitan and large regional hospitals, as well as small rural hospitals provide a comprehensive network of care.

This capability framework delineates 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 with other maternity and newborn services within the context of statewide services.

This capability framework is a publication of the Department of Health (department), developed in conjunction with the Maternity and Newborn Clinical Network (MNCN).

This document should be read in conjunction with the relevant industrial agreement, including any local agreements. It assumes that health services have recruited with a view to meeting midwife to patient ratios.

In situations where services implement alternative models of care it is assumed that the processes for approval of these models are in accordance with the relevant industrial agreement.

Contents

Part 1

Overview of Capability Framework

1 Objectives

The objectives of this framework are:

- to assist a transparent planning approach for service providers, consumers and the department, based on service capability, for the provision of maternity and newborn services
- to assist health services to provide a service appropriate to their individual circumstances and communities
- To assist health services to make informed decisions, by defining the minimum standards in terms of resources, protocols and service arrangements that need to be formalised to manage different degrees of complexity of care.

As a result, each health service will be able to operate within their role delineation as a provider of safe and effective maternity and newborn services within Victoria.

2 Context

2.1 Background

As part of service planning, the department is establishing service capability frameworks in key service delivery areas. Maternity service providers have also expressed an interest in the development of a clear role delineation framework. Such frameworks have existed for over 30 years and over time have been refined in international, national and state documents.[2,3,4]

This capability framework is based on further development of two Victorian Government documents: Rural birthing services – a capability-based planning framework,[5] and Neonatal services guidelines – Defining levels of care in Victorian hospitals.[6] The Maternity and newborn capability framework supersedes the Rural birthing services document, and aligns with the Neonatal services guidelines.

In all other mainland states of Australia the descriptors of perinatal services has led to the delineation of six levels of care. In an endeavour to gain national consistency and to assist in the development of a National maternity plan, this new capability framework for Victoria also delineates six levels.

2.2 Maternity and newborn services in Victoria

The current system of maternity and newborn services in Victoria includes three hospitals with tertiary services (and a fourth tertiary service dedicated to neonatal services), and a range of metropolitan and large regional hospitals and small rural hospitals. The tertiary hospitals provide a statewide service for the most complex pregnancies and newborn care needs; other services cater for different levels of complexity, but normal risk pregnancies can be managed at any level of service, and normal risk births at Level 2 to Level 6 services.

Predicting birth numbers is complex due to a range of social and demographic factors. Shifts in public and private sector births are also subject to change. The total number of births has steadily risen in metropolitan, regional and rural Victoria in recent years. Total live births in the state have risen from a low of 61,623 in 2001 to 70,128 in 2008.

Approximately 70 per cent of hospital-based births in Victoria are in public hospitals, the remainder are in private hospitals. Approximately 70 per cent of public hospital births occur in metropolitan Melbourne. Of the public hospital births that occur in regional and rural areas, about 70 per cent occur in either large regional centres or in sub-regional health services – the remainder are in local rural health services.

2.3 Levels of care

This capability framework delineates 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 with other maternity and newborn services within the context of statewide services.

Previously three levels of care have been defined:[2,3,5,6]

- **Primary maternity services** are available for women who experience an uncomplicated pregnancy and birth, and do not require ongoing specialist supervision or intervention. The service providers in this level are usually general practitioners and midwives, although obstetricians may also participate in providing primary care in some locations.

- **Secondary maternity services** are for women who have or develop complications and require secondary level medical input during pregnancy or birth. Women are referred for medical care, provided at the same hospital or through transfer to another hospital during pregnancy or labour. Midwives are still involved, both during the antenatal period and in providing continued clinical care in labour and the postnatal period.
- **Tertiary maternity services** are for women and babies with complex and/or rare medical conditions, who require multidisciplinary specialist care. Specialist obstetricians are particularly essential in providing tertiary level care, with midwives still involved in providing continued clinical care, during labour and the postnatal period. Victoria has three hospitals that provide tertiary maternity services. Women are referred or transferred to a tertiary hospital during pregnancy or labour.

Over time the levels of care provided by health services have been further refined into six levels. This framework defines the levels of care provided by health services:

- **Levels 1, 2** and **3** (Primary maternity care) – Normal and low risk pregnancies and babies
- **Levels 4** and **5** (Secondary maternity care) – Medium risk pregnancies and babies and moderate complications
- **Level 6** (Tertiary maternity care) – Complex pregnancies, births and neonatal intensive care.

2.4 The Maternity and Newborn Clinical Network

The Maternity and Newborn Clinical Network (MNCN) was established in August 2007 by the then Victorian Department of Human Services (now the Department of Health).

Clinical Networks are defined as linked groups of health professionals working across organisational boundaries, applying principles of cooperation and partnership and focussing on the needs of patients to improve access, equity and quality of care. In addition to supporting clinicians in the provision of optimal clinical care, one of several key roles of each network is to inform strategic and operational planning for health and health service delivery.

In its first year the MNCN consulted widely with clinicians throughout Victoria by multiple visits to health services, personal communication and through eight fora held in different parts of the state. A major issue identified early was the need for every health service and its clinicians to be clear about the services that they should be providing within their own settings as part of the regional and statewide provision of maternity and neonatal care. This includes a clear description of the lines of consultation, referral and transfer between services according to the care required.

The MNCN set up an advisory group to advise the department on a capability framework to provide the necessary structure for planning and maintaining maternity and newborn services. Representatives were selected from different clinical and administrative disciplines from metropolitan, regional and rural health services, as well as the Perinatal Emergency Referral Scheme, the Newborn Emergency Transport Service, and Ambulance Victoria (see Appendix 1).

This framework is the result of these processes, and provides clarity for health services and individual clinicians.

3 The function of the capability framework

3.1 General

The focus of this capability framework is on the level of care provided at each health service. The framework does not propose any particular model of care for maternity and newborn services.

The most important issue for both mothers and their babies is an accessible, safe and quality outcome.

Where possible mothers and babies should receive antenatal and postnatal care close to where they live, and to give birth within their local community. This will be possible for the majority of mothers and babies. For some women who have normal risk pregnancies and births, the local community may be served by a tertiary hospital.

Where an increased level of risk is recognised in a pregnancy, birth or newborn it is important that the care is provided in a facility which has the capability level that matches the level of risk.

There should be clearly defined links between different levels of services to assist transition between care providers and to provide consistent continuity of care practices.

This framework of levels of care provides a guide for mothers and babies to the most appropriate point of access to the health system.

3.2 Normal, at-risk and complicated pregnancy and birth

It is recognised that for the majority of women their pregnancy and birth are normal physiological processes.

Risk factors may occur and be recognised before conception, during the course of the pregnancy, or during birth and may influence the level of care for the mother or baby.

Complications can also occur during pregnancy and birth, or in the baby following birth.

Potential risk factors for women and for newborn babies are given in Appendix 2 and Appendix 3, respectively.

3.3 Alignment of level of risk with level of care

Women experiencing a normal pregnancy can be managed by local midwives and general practitioners, and may choose care from one of several models of care.

Recognition of risk factors requires consultation with or referral to appropriate clinicians and to appropriate level facilities, to ensure that the identified risk is managed appropriately.[7,8]

In pregnancies with an identified risk factor, the gestation of the pregnancy is the single factor that most often determines the level of care required.

Similarly, there are risk factors for babies that determine the best place for their care. The most influential factor in determining the appropriate level of care is the gestational age.

Part 2 of this framework provides further detail on levels of care.

3.4 Assessment and referral

All Victorian women should have access to primary maternity care and if needed should have access to referral and transfer to secondary or tertiary level services.[1]

All women should have regular assessment of their pregnancies to confirm normal progress or to enable early identification of the development of risk factors or complications.[9]

Where risk factors or complications are identified, the pregnancy care management plan should be modified accordingly.

Where a woman or her baby requires a level of care beyond what can be safely and effectively provided by the local health service, there must be established policies and procedures for consultation and referral, and if necessary, transfer to a higher level of care.

It is equally important that the woman is transferred back to her referring health service as soon as safely possible.

Consultation, referral and transfer processes should be established and documented between health services with different levels of maternity and newborn care within appropriate geographic boundaries.

These referral processes are supported by a number of other initiatives, including:

- The Victorian Maternity Record (VMR) – a hand-held pregnancy record to enhance consistent communication between maternity care providers and to involve women in their care.
- The Perinatal Emergency Referral Service (PERS) – for access to tertiary obstetric advice and coordination of transfers.
- The Newborn Emergency Transport Service (NETS) – for access to tertiary neonatal advice, coordination of transfers, emergency & elective transport and for the provision of neonatal education.

Other supports for maternity and neonatal services are listed in Appendix 4.

3.5 Variation in level of service

While this framework is intended to provide prescriptive guidelines for service capability, it is recognised that some degree of flexibility may need to be accommodated in any given service because of local circumstances.

It is also recognised that service delineation is not static and that regular ongoing assessment should be undertaken to account for variables in the organisation that may alter the capability of the health service to provide care at a particular level.

Where variation does occur it is incumbent on the health service to have a clear rationale for this variation, and ensure if there are aspects of care that cannot be met that there are clear organisational policies and procedures in place to provide referral or transfer to an appropriate service level.

3.6 Workforce implications

Recommended qualifications, skills and experience of staff for each level of service are described in this document.

Credentialling, admitting rights and clinical privileges for these staff remain the responsibility of the employing health service.

Health services providing less complex care need to ensure they have clinical capabilities to support the woman and/or baby while arranging and waiting for assistance, advice and/or the retrieval services.

3.7 Continuing education and competency

For the maintenance of competencies all health services should provide access to educational support for health professionals involved with pregnant and birthing women and their babies, in at least the following areas:

- antenatal and postnatal care
- normal progress of labour
- CTG interpretation
- identification and management of maternity emergency situations
- neonatal resuscitation
- basic/advanced adult life support.

4 Health service planning

This framework is designed to guide health services in the provision of safe, effective and appropriate maternity care.

The services planned should be those that will best meet the identified needs of the local community; thus the population profile will assist in determining the service profile.

Decisions about the provision of maternity and newborn services should be made in the context of the health system as a whole. Inter-organisational relationships should be formalised in documented communication, referral and transfer arrangements with other health services across metropolitan, regional and sub-regional areas.

This includes clear policies and protocols for management of mothers and babies who present with problems outside the defined capability level of the maternity and newborn service.

The complexity of clinical care provided by any given maternity and newborn service is predominantly determined by the relevant workforce, physical facilities and support services available to provide that care. This capability framework sets out to detail those requirements.

Maternity and newborn services with higher levels of care in general also provide care at lower levels for mothers and babies from their geographically appropriate area.

Where there is a clear departure or variation from the recommended framework, the health service is advised to develop an appropriate strategy to mitigate risks. This may include the development of local strategies or the negotiation of solutions within the statewide system.

5 Community awareness

The adoption of this framework enables health services to demonstrate to their local communities that the services they provide are of an accepted and appropriate standard, operating within a wider system.

It is essential that women, their families and the community know and understand what level of care is offered at the local health service. It must be well understood what services are available and those that may not be available in smaller rural services, such as epidural anaesthesia and caesarean section.

Women and their families must also be aware of the locations of the higher level health services that are able to provide more complex levels of care, and of the transfer protocols and processes involved. This is an important part of pregnancy care planning and education.

6 Next steps

The department will assess and monitor access to appropriate levels of care for communities through the current service configuration. Planning across metropolitan, regional, sub-regional and rural areas will be required ensure a comprehensive mix, with varying levels of birthing and newborn services are provided to meet community need.

Where a health service currently provides a maternity and newborn service, the service should assess itself against the capability criteria to evaluate alignment and to determine the most appropriate service level. The department will work with health services to undertake this assessment.

If a health service does not meet the criteria for a required level, the service needs to consider what organisational development strategies might assist to meet the requirements, both at a local level and within the statewide system. The department and the MNCN will work collaboratively with health services to develop these strategies.

It is recognised that the criteria in this capability framework must remain relevant to the health services providing maternity and newborn services. The criteria must also remain current and incorporate changing clinical practice where this is applicable. This will be achieved by regular review and updating of this framework.

Part 2

Description of capability framework

This section of the capability framework describes the six levels of care in detail, under the headings of:

- Complexity of care
- Infrastructure
- Workforce
- Diagnostic services
- Support services
- Clinical governance
- Service links
- Education and research.

Level 1

Complexity of care	
Maternal	Provision of pregnancy care and postnatal support without planned births such as no in-patient birthing facility. Need to manage unexpected presentations of imminent birth and mothers and newborn babies following birth before arrival.
	Low risk pregnancy care by a shared care model in consultation with an identified appropriate birthing facility. Usually by GPs or midwives; birthing provided at the nearest available local facility.
	Postnatal domiciliary care provided by midwives; this should be in the home, unless staffing and maternal location requires that it be at the health service.
Neonatal	Postnatal domiciliary management of newborns born at 37 weeks gestation or more without complications.

Infrastructure	
Birth rooms	Not required.
	Equipment to support imminent birth as detailed in Appendix 5.
Nursery	Not required.
	Neonatal resuscitation equipment (Appendix 6) and ability to stabilise infant prior to retrieval. Usually in emergency department.
Operating rooms	Not required.
Adult intensive care unit / High dependency unit	Not required.

Workforce		
Normal pregnancy care and postnatal care is provided by local medical and/or midwifery practitioners in consultation with the identified birthing facility: where established referral pathways are recommended, these may be local, regional or statewide.		
Medical	Obstetric	Established referral pathways to specialist obstetrician/s in higher level service for consultation, referral or transfer.
	General practice	GPs credentialled for shared antenatal/ postnatal care; may be individual or group; may work in collaboration with local midwives.
	Anaesthetics	Not required.
	Paediatrics	Established referral pathways to specialist paediatrician/s in higher level service for consultation, referral or transfer.
Midwifery	Midwives for shared pregnancy care and postnatal maternity care, working in collaboration with local GPs.	

Workforce continued	
Nursing	A midwife will be responsible for postnatal care. In situations where services implement alternative models of care it is assumed that the processes for approval of these models are in accordance with the relevant industrial agreement.
Allied health	Established referral pathways to physiotherapist, social worker and dietician. Access to telephone interpreter service as a minimum.

Diagnostic services	
Pathology	Blood and specimen collection service available locally, processing may be at a different location.
Diagnostic imaging	Established referral pathways to all diagnostic imaging modalities; may be local or accessible in the region.

Support services	
Blood and blood products	No blood transfusion service required, with no on call.
Pharmacy	Drugs available through Imprest system.
	Established referral pathways to pharmacist for consultation – see Appendix 7.
Mental health	Established referral pathways to specialist mental health practitioners and facilities – see Appendix 7.
Drug and alcohol services	Established referral pathways to specialist services – local or regional – see Appendix 7.
	Quit smoking support available.
Family support services	Established referral pathways to Child FIRST and Child Protection Services.
	Established referral pathways and communication with Maternal and Child Health Nurses (M&CHN).

Clinical governance	
Guidelines	Each health service identifies appropriate guidelines defining the scope of practice of the health service for maternity and neonatal patients.
	Specific guidelines are required to address access, admission and discharge to and from the service, and for consultation, referral and transfer where appropriate.
	Guidelines are required for the contingency management of unplanned birth and transfer following unplanned birth.
Competence and credentialling	Each facility requires the relevant credentialling for medical staff or competency assessment process for relevant other staff.
Peer review	A formal annual assessment by peer review process is established and maintained.

Service links	
Transfer guidelines	Normal birthing care organised with the identified appropriate birthing facility.
	Formal transfer guidelines for increased complexity of care need to be established with geographically appropriate health services with higher levels of care.
Communication guidelines to other services	For these models of pregnancy and postnatal care, shared care agreements are required outlining the responsibilities of each partner including credentialling, referral guidelines and peer review process.

Education and research
All medical, midwifery and nursing practitioners require access to adult and neonatal resuscitation education and to regular credentialling.
Education programs specific to pregnancy care, emergency (imminent) birth and post natal care education are required.
Initiation and participation in research is not required, but Level 1 health services may voluntarily participate in research initiated as part of a regional program.

Level 2

Complexity of care	
Maternal	Management of normal risk pregnancies including management of labour, birth and puerperium at 37 weeks gestation or more.
	Depending on local facilities and personnel, option for planned, booked elective caesarean sections according to RANZCOG statement.[10]
Neonatal	Postnatal in-patient and domiciliary management of newborns at 37 weeks gestation or more without complications.
	Minor conditions not requiring additional nursing or specialist medical care, e.g. short term transient mild respiratory distress, minor feeding difficulties.
	Depending on local facilities and personnel, option for phototherapy for jaundice without significant pathological cause, with advice from specialist paediatrician.

Infrastructure	
Birth rooms	Designated room/space for birthing – see Design guidelines for hospitals and day procedure centres.[11]
	Equipment to support labour, birth and puerperium.
	Twenty-four hour access to fetal monitoring and interpretation.
	Equipment to support adult and neonatal resuscitation.
Nursery	Equipment and space as per Neonatal services guidelines[5] for Level 1 Nursery.
	Facilities for stabilisation prior to retrieval of newborn infants.
Operating rooms	Optional: Equipment and space required for elective caesarean section[12] and for neonatal resuscitation.
Adult intensive care unit / High dependency unit	Not required on site.

Workforce		
As for Level 1; in addition -		
Medical	Obstetric	Established referral pathways to specialist obstetrician.
	General practice	GPs credentialed for obstetric care.
		For the option of elective caesarean section: specialist obstetrician, GP credentialled to perform caesarean section or general surgeon credentialled for elective caesarean section.
	Anaesthetics	GP anaesthetists credentialled for provision of appropriate obstetric anaesthesia and analgesia, including spinal anaesthetic.[13]
	Paediatrics	Established communication pathway to specialist paediatrician for consultation, referral or transfer.
Midwifery	All labouring and birthing women will be cared for by a midwife in accordance with ratios outlined in the industrial agreement.	
Nursing	A midwife will be responsible for postnatal care. In situations where services implement alternative models of care it is assumed that the processes for approval of these models are in accordance with the relevant industrial agreement.	
Allied health	Established referral pathways to physiotherapist, social worker, continence advisor and dietician. These may be local, visiting or readily accessible in the region. Access to telephone interpreter service.	

Diagnostic services	
Pathology	Blood and specimen collection service available locally, processing may be at a different location.
Diagnostic imaging	Established referral pathways to all diagnostic imaging modalities may be local or readily accessible in the region.

Support services	
Blood and blood products	Ability to administer blood products or blood substitution products within one hour such as emergency blood supplies available locally or by rapid delivery from regional supplier. This requires staff available to cannulate and administer blood.
	Group and cross-match blood available for elective caesarean section.
Pharmacy	Drugs available through imprest system.
	Established referral pathways to pharmacist for consultation – see Appendix 7.
Mental health	Established referral pathways to specialist mental health practitioners and facilities.
Drug and alcohol services	Established referral pathways to specialist services – local or regional.
	Quit smoking support available.
Family support services	Established referral pathways to Child FIRST and Child Protection Services.
	Established referral pathways and communication with Maternal and Child Health Nurses (M&CHN).

Clinical governance	
Guidelines	Each health service requires appropriate guidelines defining the scope of practice of the health service for maternity and neonatal patients.
	Specific guidelines are required to address access, admission and discharge to and from the service, and for consultation, referral and transfer where appropriate.
	Guidelines are required for the management of unexpected high risk women and/or neonates and consultation, referral and/or transfer as appropriate.
	Service contingency guidelines are required to cover the unavailability of required resources with a documented process informing women and the appropriate alternate facility.
Competency/ credentialling	Each facility requires a comprehensive credentialling for medical staff and competency process for all maternity care clinicians.
Peer review	A formal annual assessment by peer review process is established and maintained.

Service links	
Transfer guidelines	Established links with surrounding Level 1 health services regarding consultation, referral and patient transfer.
	Established links with geographically appropriate health services with higher levels of care regarding consultation, referral and patient transfer.
	Formal transfer guidelines need to be established.
Communication guidelines to other services	Established communication links with surrounding Level 1 health services and practitioners.
	Established formal communication procedures with higher level units to facilitate the links described above.

Education and research
Continuing education programs for clinicians within the health service, and also available to providers in surrounding health services.
Health services regularly participate in Department of Health professional development and education programs including, Neonatal resuscitation (NETS), Intrapartum fetal surveillance education, Pregnancy Care Program, and Maternity Emergency Education Program.
Initiation and participation in research is not required, but Level 2 health services may voluntarily participate in research initiated as part of a regional program.

Level 3

Complexity of care	
Maternal	Normal risk pregnancies including management of labour, birth and puerperium at 37 weeks gestation or more including elective and emergency caesarean section.
Neonatal	Postnatal in-patient and domiciliary management of newborns greater than 37 weeks gestation without complications.
	Minor conditions not requiring additional nursing or specialist medical care e.g. short term transient mild respiratory distress, minor feeding difficulties.
	Depending on local facilities and personnel, option for phototherapy for jaundice without significant pathological cause, with advice from specialist paediatrician.

Infrastructure	
Birth rooms	Designated room/space for birthing (refer to *Design guidelines for hospitals and day procedure centres*[12]).
	Equipment to support labour, birth and puerperium.
	Twenty-four hour access to fetal monitoring and interpretation.
	Equipment to support adult and neonatal resuscitation.
Nursery	As per *Neonatal services guidelines*[6] for Level 1 nursery.
	Equipment and space as per ***Neonatal services guidelines***[6] Level 1.
	Facilities for stabilisation prior to retrieval of newborn infants.
Operating rooms	Equipment and space in operating rooms[12] 24 hours a day with on call service for performance of caesarean section and neonatal resuscitation.
Adult intensive care unit / High dependency unit	Not required on site.

Workforce		
Medical	Obstetric	Must have established consultation and referral pathways to specialist obstetrician.
	General practice	Maternity care by GPs credentialled for obstetric care.
		One of specialist obstetrician, GP credentialled to perform caesarean section or general surgeon credentialled for caesarean section must be available for elective or emergency caesarean section 24 hours a day.
	Anaesthetic	GP anaesthetist or specialist anaesthetist on call 24 hours a day.
		GP anaesthetist or specialist anaesthetist must be able to perform spinal and general anaesthesia.[13]
	Paediatric	Paediatrician or GP with paediatric skills/ neonatal ALS accreditation available/on call 24 hours a day; availability within a time consistent with the health service's risk management protocol.
		Established consultation and referral pathways to specialist paediatrician as per Neonatal services guidelines.[6]

Workforce continued	
Midwifery	All labouring and birthing women will be cared for by a midwife in accordance with ratios outlined in the industrial agreement.
Nursing	A midwife will be responsible for postnatal care. In situations where services implement alternative models of care it is assumed that the processes for approval of these models are in accordance with the relevant industrial agreement.
Allied health	Established referral pathways to physiotherapist, social worker, continence advisor and dietician. These may be local, visiting or readily accessible in the region. Access to telephone interpreter service.

Diagnostic services	
Pathology	Blood and specimen collection service available locally, processing may be at a different location.
	Access to local on call service for urgent requests or point of care pathology.
Diagnostic imaging	Basic radiology on site with 24 hours a day on call availability.
	Ultrasound available on site, with staff able to operate and interpret.
	Established referral pathways to all diagnostic imaging modalities; may be local or readily accessible in the region.

Support services	
Blood and blood products	Blood and volume expanders on site with the ability to administer immediately.
	Group and cross-match available for elective and emergency caesarean section.
	Established pathways to obtain complex blood products.
Pharmacy	Drugs available through imprest system.
	Established referral pathways to pharmacist for consultation – see Appendix 7.
Mental health	Established referral pathway to specialist mental health practitioners and facilities.
Drug and alcohol services	Established referral pathways to specialist services – local or regional.
	QUIT Smoking Support Program.
Family support services	Established referral pathways to Child FIRST and Child Protection Services.
	Established referral pathways and communication with Maternal and Child Health Nurses (M&CHN).

Clinical governance	
Guidelines	Each health service requires appropriate guidelines defining the scope of practice of the health service for maternity and neonatal patients.
	Specific guidelines are required to address access, admission and discharge to and from the service, and for consultation, referral and transfer where appropriate.
	Guidelines are required for the management of unexpected high risk women and/or neonates and consultation, referral and/or transfer as appropriate.
	Service contingency guidelines are required to cover the unavailability of required resources with a documented process informing women and the appropriate alternate facility.

Competency/ credentialling	Each facility requires a comprehensive credentialling for medical staff and competency processes for all maternity care clinicians.
Peer review	A formal annual assessment by peer review process is established and maintained.

Service links	
Transfer guidelines	Established links with surrounding Level 1 and 2 health services regarding consultation, referral and patient transfer.
	Established links with geographically appropriate health services with higher levels of care regarding consultation, referral and patient transfer.
	Formal transfer guidelines need to be established.
Communication guidelines to other services	Established communication links with surrounding Level 1 and 2 health services and practitioners.
	Established formal communication procedures with higher level units to facilitate the links described above.

Education and research
Continuing education programs for health providers in the health service, available also to providers in surrounding Level 1 and 2 health services.
Health services regularly participate in Department of Health professional development and education programs including Neonatal resuscitation (NETS), Intrapartum fetal surveillance education, Pregnancy Care Program and, Maternity Emergency Education Program.
Initiation and participation in research is not required, but Level 3 health services may voluntarily participate in research initiated as part of a regional program.

Level 4

Complexity of care	
Maternal	Management of low and moderate risk pregnancies including management of labour, birth and puerperium at 34 weeks gestation or more.
Neonatal	As per *Neonatal Services Guidelines*[6] Level 2 Low dependency:
	Uncomplicated infants of 34 weeks gestation or more, birthweight at least 2,000 grams (including growing preterm and convalescing infants).
	Infants requiring incubator care for short term transition problems or mild complications, including: oxygen requirement less than 40 per cent, apnoea monitoring, blood glucose monitoring, short term intravenous therapy, phototherapy, gavage feeding.

Infrastructure	
Birth rooms	Designated room/space for birthing – see *Design Guidelines for Hospitals and Day Procedure Centres*.[11]
	Equipment to support labour, birth and puerperium.
	Twenty-four hour access to fetal monitoring and interpretation.
	Equipment to support adult and neonatal resuscitation.
Nursery	Conforms to *Design Guidelines for Hospitals and Day Procedure Centres*.[11]
	Space and equipment as per *Neonatal Services Guidelines*[6] Level 2 low dependency nursery.
	Facilities for stabilisation prior to retrieval of newborn infants.
Operating rooms	Equipment and space in operating rooms 24 hours a day with on call service for performance of caesarean section[12] and neonatal resuscitation.
Adult intensive care unit / High dependency unit	High dependency unit available onsite.

Workforce		
Medical	Obstetric	Specialist obstetrician on staff to advise on obstetric service.
		Specialist obstetrician available on call 24 hours and/or GP obstetrician credentialled for advanced obstetric care (including caesarean section).
	General practice	GP obstetrician credentialled for advanced obstetric care (including caesarean section) on call 24 hours a day (alternative to specialist obstetrician).
		Accredited Shared Care Program available for pregnancy care for low risk women from local area.
	Anaesthetics	Specialist anaesthetists available 24 hours on call and/or:
		Credentialled GP anaesthetists available 24 hours a day on call.
		Specialist anaesthetist or GP anaesthetist must be able to perform spinal and general anaesthesia.[13]
	Paediatrics	Paediatrician/s on staff (VMO) to advise on neonatal service and clinical care.
		Paediatrician or GP with paediatric skills/neonatal ALS accreditation available/ on call 24 hours a day; availability within a time consistent with the health service's risk management protocol.
		RMO available for special care nursery.

Midwifery	All labouring and birthing women will be cared for by a midwife in accordance with ratios outlined in the industrial agreement.
	Designated midwifery educator either part-time or full-time.
Nursing	Nurse/midwife in charge of the nursery should have minimum of 3 years recent fulltime or equivalent midwifery or neonatal experience, including some Level 2 High dependency neonatal nursing experience or qualification.
	At least one registered nurse/midwife allocated to the neonatal area on each shift should have recent Level 2 High dependency experience.
	Personnel with expertise in lactation should be available.
Allied health	On site access to physiotherapist, social worker, interpreters, continence advisor and dietician.

Diagnostic services	
Pathology	Blood and specimen collection service 24 hours a day on site.
	Twenty-four hour access to pathology or point of care pathology.
Diagnostic imaging	Radiology available 24 hours a day on call.
	Obstetric ultrasound service available 24 hours a day on call.

Support services	
Blood and blood products	Cross-matched blood readily available.
	Blood storage facilities on site.
	Blood and volume expanders on site with the ability to administer.
	Established pathways to obtain complex blood products.
Pharmacy	On site pharmacy with 24 hour access.
	Drugs available through imprest system.
Mental health	Established referral pathways to specialist mental health practitioners and facilities.
Drug and alcohol services	Established referral pathways to specialist services – local or regional.
	QUIT Smoking Support Program.
Family support services	Established referral pathways to Child FIRST and Child Protection Services.
	Established referral pathways and communication with Maternal and Child Health Nurses (M&CHN).

Clinical governance	
Guidelines	Each health service requires appropriate guidelines defining the scope of practice of the health service for maternity and neonatal patients.
	Specific guidelines are required to address access, admission and discharge to and from the service, and for consultation, referral and transfer where appropriate.
	Guidelines are required for the management of unexpected higher risk women and/or neonates and consultation, referral and/or transfer as appropriate.
Competency/ credentialling	Each facility requires a comprehensive credentialling for medical staff and competency processes for all maternity care clinicians.
Peer review	A formal annual assessment by peer review process is established and maintained.

Service links	
Transfer guidelines	Established links with surrounding Level 1, 2 and 3 health services regarding consultation, referral and patient transfer; accepts appropriate transfers from Level 1, 2 and 3 services.
	Established links with geographically appropriate health services with higher levels of care, including NETS and PERS, regarding consultation, referral and patient transfer.
	Accepts appropriate convalescent transfers from Level 5 and 6 services.
Communication guidelines to other services	Established communication links with surrounding Level 1, 2 and 3 health services and practitioners.
	Established formal communication procedures with Level 5 and 6 services.

Education and research
Continuing education programs for health providers in the health service, available also to providers in surrounding Level 1, 2 and 3 health services.
Health services regularly participate in Department of Health professional development and education programs including Neonatal resuscitation (NETS), Intrapartum fetal surveillance education, Pregnancy Care Program and Maternity Emergency Education Program.
Level 4 health services may be involved in multicentre research.

Level 5

Complexity of care	
Maternal	Management of moderate and selected high risk pregnancies including management of labour, birth and puerperium at 32 weeks gestation or more.
Neonatal	As per *Neonatal Services Guidelines*[6] Level 2 High dependency.
	Uncomplicated 32 weeks gestation or more, or birth weight at least 1300 grams: includes growing preterm and convalescing infants.
	Incubator care for infants who are sick or preterm, requiring oxygen less than 60 per cent, cardiorespiratory monitoring, short term intra-arterial blood pressure monitoring, close observation – for example Neonatal Abstinence Syndrome.
	Short term ventilator care pending transfer (less than 6 hours).
	Depending on local facilities and personnel, option for nasal CPAP within NSAC guidelines, exchange transfusion.

Infrastructure	
Birth rooms	Designated room/space for birthing – see *Design Guidelines for Hospitals and Day Procedure Centres.*[11]
	Equipment to support labour, birth and puerperium.
	Twenty-four hour access to fetal monitoring and interpretation.
	Ability to determine intrapartum fetal acid/base balance.
	Portable ultrasound located in birthing area with staff trained to use and interpret results.
	Equipment to support adult and neonatal resuscitation.
Nursery	Conforms to *Design Guidelines for Hospitals and Day Procedure Centres.*[11]
	Isolation facilities in nursery as per Neonatal Services Guidelines.[6]
	Space and equipment as per Neonatal Services Guidelines[6] Level 2 High dependency nursery.
	Facilities for stabilisation prior to retrieval of newborn infants.
Operating rooms	Equipment and space in operating rooms available 24 hours a day for performance of caesarean section[12] and neonatal resuscitation.
	Peri operative staff available 24 hours a day.
Adult intensive care unit / High dependency unit	Access to Intensive care unit or High dependency unit on site.

Workforce		
Medical	Obstetrics	Specialist obstetrician on staff to advise on obstetric service.
		Specialist obstetricians available on call 24 hours and/or GP obstetrician credentialled for advanced obstetric care (including caesarean section).
		A designated obstetric registrar and/or HMO on site 24 hours a day.
	General practice	Accredited Shared Care Program available for pregnancy care for low risk women from local area.
	Anaesthetics	Consultant anaesthetists available 24 hours on call.
		Anaesthetic registrar on site 24 hours a day.

	Paediatrics	Paediatrician/s on staff to advise on neonatal service and clinical care.
		Consultant paediatrician on call, available in hospital consistent with hospital protocol.
		Paediatric registrar and/or HMOs on site 24 hours a day.
Midwifery	Midwives rostered on duty 24 hours a day.	
	Designated midwifery educator either part-time or full-time.	
Nursing	A designated senior nurse/midwife with neonatal experience and managerial responsibility.	
	A designated nurse/midwife responsible for further education and training, including in-service experience in resuscitation of neonates.	
	A registered nurse/midwife should be in charge of the nursery on each shift if it is continuously occupied. This person must have a midwifery or paediatric qualification and should have high dependency Level 2 experience. Other registered nurses/midwives should have some neonatal high dependency experience and/or have completed the Level 2 course.	
Allied health	On site access to physiotherapist, social worker, interpreters, continence advisor and dietician.	

Diagnostic Services	
Pathology	Blood and specimen collection service on site 24 hours a day.
	24 hour access to pathology or point of care pathology.
Diagnostic imaging	Radiology available on call 24 hours a day.
	Obstetric ultrasound service available on call 24 hours a day.

Support Services	
Blood and blood products	Full range of blood and blood products available 24 hours a day.
	Cross-matched blood readily available.
	Blood storage facilities on site.
Pharmacy	On site pharmacy with 24 hour access.
	Drugs available through imprest system.
Mental health	Established referral pathways to specialist mental health practitioners and facilities.
Drug and alcohol services	Established referral pathways to specialist services – local or regional.
	QUIT Smoking Support Program.
Family support services	Established referral pathways to Child FIRST and Child Protection Services.
	Established referral pathways and communication with Maternal and Child Health Nurses (M&CHN).

Clinical governance	
Guidelines	Each health service requires appropriate guidelines defining the scope of practice of the health service for maternity and neonatal patients.
	Specific guidelines are required to address access, admission and discharge to and from the service, and for consultation, referral and transfer where appropriate.
	Guidelines are required for the management and referral and/or transfer as appropriate of unexpected presentations of women and/or neonates with problems of a complexity requiring Level 6 care.
Competency/ credentialling	Each facility requires a comprehensive credentialling/competency process for all maternity care clinicians.
Peer review	A formal annual assessment by peer review process is established and maintained.

Service links	
Transfer guidelines	Established links with surrounding Level 1, 2, 3 and 4 health services regarding consultation, referral and patient transfer; accepts appropriate transfers from Level 1, 2, 3 and 4 services.
	Established links with Level 6 health services including NETS and PERS regarding consultation, referral and patient transfer.
	Accepts appropriate convalescent transfers from Level 6 services.
Communication guidelines to other services	Established communication links with surrounding Level 1, 2, 3 and 4 health services and practitioners.
	Established formal communication procedures with Level 6 services.

Education and research
Continuing education programs for health providers in the health service, available also to providers in surrounding Level 1, 2, 3 and 4 health services.
Health services regularly participate in Department of Health professional development and education programs including Resuscitation (NETS), Intrapartum fetal surveillance education, Pregnancy Care Program and Maternity Emergency Education Program.
Level 5 health services may initiate research or be involved in multicentre research.

Level 6

Complexity of care	
Maternal	Specialising in high risk pregnancy care for women from across the state.
	Provides pregnancy care for normal, low and moderate risk pregnancies from local geographic area.
	Specialist services include but are not restricted to Fetal Management Unit (FMU), Multiple Pregnancy Service, Diabetes Service, Alcohol and Drug Service.
Neonatal	Comprehensive care for all neonates, within a multidisciplinary management model..
	May provide Level 2–5 services (previously Level 1 and 2).
	Full range of respiratory support available.
	May provide or have links to neonatal surgery and care for complex congenital and metabolic diseases of the newborn.
	Provide or have links to a broad range of sub-speciality consultative and paramedical services as per *Neonatal services guidelines*.[6]

Infrastructure	
Birth rooms	Rooms to conform with safety standards for example cardiac protection.
	Easy access to nursery facilities.
	Fully equipped, access to adult cardiac monitoring, I-A pressure monitoring, access to adult intensive care unit with full range of expertise to support critically ill adult.
	Direct access to operating rooms for performance of urgent caesarean section.
	Ultrasound machine located in birth suite area, operated and interpreted by accredited staff 24 hours a day.
	Full range of cardiotogography for antenatal and intrapartum care.
	Ability to determine fetal acid/base balance or lactate.
	May include designated high dependency area for women.
Nursery	Conforms with *Design guidelines for hospitals and day procedure centres.*[11]
	Equipment and space as per *Neonatal services guidelines*[6] Level 3, including rooms required, area per patient bed, electrical and gas services, lighting, sound control, emergency power, infection control including isolation areas.
Operating rooms	Twenty-four hour a day capability to perform emergency caesarean section within 30 minutes 'from decision to birth'.
Adult intensive care unit / High dependency unit	Access to adult intensive care unit on site with full range of expertise to support critically ill adult.

Workforce		
Medical	Obstetrics	A specialist obstetric consultant appointed as clinical head of service.
		Specialist obstetrician available for consultation 24 hours a day and able to attend within 30 minutes from decision to birth.
		A designated obstetric registrar onsite 24 hours a day.
		Onsite specialist registrar with authority to open theatre and experience to at a minimum commence operating without direct supervision while awaiting consultant presence.

	Medicine/surgery	Access to obstetric medical/specialist physician services.
		Established referral pathway for surgical consultation/referral.
	General practice	Accredited Shared Care Program available for pregnancy care for low risk women from local area.
	Anaesthetics	Specialist anaesthetic consultant available 24 hours a day.
		Anaesthetic registrar on site 24 hours a day.
	Paediatrics	Established referral pathway to sub specialist paediatric medical and surgical services.
	Neonatology	An appointed specialist neonatology consultant appointed as head of unit.
		Specialist neonatal consultant staff available 24 hours a day. At least one consultant should be predominantly present during working hours and exclusively rostered to be available and able to proceed immediately to the unit at all times.
		Junior/registrar staff undertaking basic or advanced training in perinatal/neonatal medicine.
		There must be at least one doctor on site 24 hours a day who is experienced to deal with all emergencies.
		There should be 24 hour resident cover by an appropriately trained doctor who should be available for the intensive care unit at all times and not be required to cover any other service.
Midwifery	Midwives on duty in all areas of maternity care 24 hours a day.	
	Full-time dedicated midwifery educator/s is/are required for the continuing education of the midwifery staff and may contribute to midwifery education in Levels 1–5 health services.	
Nursing	The nurse/midwife in charge should hold an appropriate postgraduate qualification.	
	At least one registered nurse division 1/midwife with NIC certification must be on duty at all times.	
	Established referral pathways to Neonatal Nursing Outreach Program (for example Care Link), providing nursing care for long term infants in the community.	
	A nurse coordinator to manage discharge and arrange follow up all high risk neonates.	
	A minimum of one nurse educator with NIC qualifications and post graduate in education.	
	Equipment nurse with NIC training.	
Allied health	On site or established referral pathway to: paediatric allied heath including dietician, physiotherapy, social work, occupational therapy, speech pathology, audiology, child protection, lactation consultants.	
	Adult allied health services including, diabetes educators, dietician, occupational therapy, physiotherapist, social work, interpreters, lactation consultants.	
	Pastoral care - minimum Monday–Friday, plus on call 24 hour roster.	

Diagnostic services		
Pathology	On site pathology facility that meets accreditation standards of the Royal College of Pathologists of Australasia and the National Association of Testing Authorities (RCPA/NATA).	
	Full range of services with on call, available 24 hours a day.	
	Core laboratory functions on site 24 hours a day, including, but not limited to:	
		Biochemistry for blood gas, electrolyte and basic renal function assessment.
		Haematology for full blood examination, including platelet estimation.
		Microbiology for assessment of acute infection.
		Serology and Blood Bank.
Diagnostic imaging	Access to full range of services including plain x-ray, ultrasounds 24 hours a day with on call.	
	Access to full range of radiological services, including CT, MRI on call 24 hours a day.	

Support services	
Blood and blood products	Full range of products available 24 hours a day.
Pharmacy	On site pharmacy service, managed by clinical pharmacist.
	Full range of services on weekdays with on call nights and weekends.
	Drugs available through imprest system.
Biomedical engineering	On site biomedical engineering service, managed by a qualified biomedical engineer.
	Full range of services on weekdays with on call nights and weekends.
Mental health	On site psychiatric services.
	Access to or established referral pathways to designated adult inpatient psychiatric beds.
	Established referral pathways to CAMHS.
	Access or referral pathways to designated child and adolescent psychiatric beds.
	Access to psychiatric liaison service.
Drug and alcohol services	Referral pathways to drug and alcohol services.
	May provide specialist service for pregnant women dependent on chemical substances.
	May provide leadership role advising other levels of health services on the management of pregnant women dependent on chemical substances.
	QUIT Smoking Support Program.
Family support services	Established referral pathways to Child FIRST and Child Protection Services.
	Established referral pathways and communication with Maternal and Child Health Nurses (M&CHN).

Clinical governance	
Guidelines	Appropriate guidelines addressing access, admission, management, transfer and discharge of maternity and neonatal patients.
	Guidelines for the criteria for transfer of women and or neonates to Levels 1–5 for ongoing care.
	Participation in quality assessment activities, including but not limited to benchmarking / data collection / critical incident review / ANZNN or other appropriate clinical network / mortality and morbidity review.
Competency/ credentialling	Each facility has a comprehensive credentialling for medical staff and competency processes for all health professionals, including a process for regular review.
Peer review	Rigorous multidisciplinary clinical practice review system.
	Provides leadership and support to assist clinical practice review in other levels of health services external to organisation.

Service links	
Transfer guidelines	Established links with surrounding Level 1–5 health services regarding consultation, referral and patient transfer.
	Accepts appropriate transfers from Level 1–5 health services; arranges appropriate convalescent transfers to Level 2–5 services.
	Facilitates and participates in the statewide perinatal referral service and neonatal transport service (PERS and NETS) regarding consultation, referral and patient transfer.
Communication guidelines to other services	Takes a lead role in the provision of perinatal services on a regional and statewide level.
	Established communication links with surrounding Level 1–5 health services and practitioners.
	Established formal communication procedures with other providers of all levels of perinatal service provision.

Education and research
Registered/accredited training facility for medical specialties (obstetrics, neonatology, obstetric anaesthesia, perinatal pathology, perinatal imaging), midwifery, neonatal nursing, allied health.
Supports entire multidisciplinary team with in-service education programs.
Provides resource centre for multidisciplinary education for regional Level 1–5 health services.
Provides full suite of library services including electronic access.
Provides leadership in research pertinent to perinatal health and disorders, including multicentre research.
Health services regularly participate in Department of Health professional development and education programs including Resuscitation (NETS), Intrapartum fetal surveillance education, Pregnancy Care Program and Maternity Emergency Education Program.

Appendices

Appendix 1

Capability framework advisory group

Members of the Maternity and newborn capability framework advisory group	
Debbie Rogers	Facilitator, Project Manager Maternity and Newborn Clinical Network
Heather Grimes	Facilitator Maternity and Newborn Clinical Network
Prof. Jeremy Oats	Director Maternity and Newborn Clinical Network
Dr Neil Roy	Neonatal Consultant Maternity and Newborn Clinical Network
Maureen Robinson	Manager Programs, Rural Service Planning Department of Health
Associate Prof. Tony Walker	General Manager of Operations Ambulance Victoria
Dr Michael Stewart	Medical Director Newborn Emergency Transport Service
Dr Jacqui Smith	Medical Director, Perinatal Emergency Referral Scheme Director of Medical Services, Kyneton District Health Service
Dr David Simon	Obstetrician West Gippsland Healthcare Group
Dr Simon Fraser	Medical Director West Gippsland Healthcare Group
Claire Letts	Clinical Director Stawell Regional Health
Kaye Gall	Associate Director of Nursing Goulburn Valley Health
Leonie Henderson	Maternity Unit Manager Northern Health
Deborah Birrell	Clinical Midwife Consultant Alpine Health
Anne McMeel	Director of Nursing Timboon and District Health Care Service
Helen Watt	Director of Nursing East Grampians Health Service
Caroline Carr	Clinical Midwife Consultant Mercy Hospital for Women
Christine Giles	Director of Nursing Northeast Health Wangaratta
Dr Louise Sterling	GP Obstetrician
Jenny Geer	Remote Area Nurse Training Project Manager Rural Ambulance Victoria

Appendix 2

Broad risk categories for maternity care

Specific examples of at risk pregnancies:[14]

At risk pregnancies

Obstetric complications may occur in any pregnancy at any time, however women with certain conditions, either solely or in combination, place them 'at risk'. In these cases, both maternal and perinatal morbidity and mortality are increased. Consideration of the model of care and care management plans for women who have the following risk factors guides decision making about the appropriate place of maternity care. It is important to note that women with multiple minor risks might require more specialised care.

Before conception or in early pregnancy
age > 35 yrs
previous genetic abnormality
known carrier or family history of hereditary condition
ethnic group at increased risk of hereditary disease
fetal abnormality detected on ultrasound
medical conditions plus or minus drug therapy, which may have fetal effects
carrier status of infections or infectious illness during early pregnancy.

During the pregnancy	
General factors	drug dependence
	heavy alcohol consumption
	history of psychotic illness
	parity ≥ para five (5)
	anaesthetic risk factors
	obvious abnormalities of skeleton, gait or posture
	assisted conception
	weight, for example BMI > 30
	smoking
	history of depression or anxiety
	hyperemesis gravidarum
	incompetent cervix
	Cholestasis.

Maternal disease	evidence of renal disease
	anaemia, < Hb110 g/L and MCV < 80 fl
	cardiac disease with some organic or functional impairment
	hypertension, for example diastolic pressure 90-100 mm/Hg
	sexually transmitted disease diagnosed during pregnancy
	bleeding diathesis
	history of epilepsy
	asthma requiring treatment during pregnancy
	previous venous thrombosis/embolism
	diabetes, gestational diabetes
	systemic lupus erythematosis
	current major depression or generalised anxiety
	current psychotropic medication.
Previous obstetric history	caesarean birth or scarred uterus
	mid trimester abortion
	pre-term labour
	difficult labour/birth
	low birth weight infant
	perinatal death
	blood group antibodies
	significant birth injury
	recurrent miscarriage
	shoulder dystocia.
Complications in present pregnancy	pre-eclampsia or pregnancy induced hypertension
	multiple pregnancy
	placenta praevia
	Polyhydramnios
	pregnancy > 42 weeks gestation
	pre-term rupture of membranes
	malpresentation, for example breech.

At labour and birth
previous caesarean section
potential anaesthetic problems
placenta praevia
previous post partum haemorrhage or retained products
suspected cephalopelvic disproportion
prolonged rupture of membranes
prolapsed cord or cord presentation
uterine rupture
confirmed non-reassuring fetal heart problems
active genital herpes at time of labour.

Appendix 3

Neonatal risk factors

The following table of risk factors is adapted from *the Neonatal Services Guidelines*.[6]

Neonatal services guideline Level 1 = Capability framework Level 2 and Level 3		
Uncomplicated:	gestation 37 weeks or greater	
	birth weight 2,500 grams or greater	
emergency resuscitation and stabilisation		
minor conditions not requiring additional nursing or specialist medical treatment		
phototherapy (in consultation with a specialist paediatrician)		
simple convalescent babies (for example, infants establishing feeding).		

Neonatal services guideline Level 2 Low dependency = Capability framework Level 4		
As above, and in addition:		
Uncomplicated:	gestation 34 weeks or greater the majority of preterm infants born at 35 or 36 weeks gestation are sufficiently mature to maintain their body temperature and feed normally enabling observation to occur in the birth unit and/or postnatal ward	
	Birth weight 2,000 grams or greater, including growing preterm and convalescing infants.	
Infants requiring incubator care for:	short-term transition problems	
	mild complications	oxygen requirement (not exceeding 40 per cent)
		apnoea monitoring
		blood glucose monitoring
		short-term intravenous therapy.

Neonatal services guideline Level 2 High dependency = Capability framework Level 5	
As above, and in addition:	
Uncomplicated:	gestation 32 weeks or greater
	Birth weight 1,300 grams or greater.
Infants requiring:	incubator care either because they are sick or preterm
	oxygen therapy (not exceeding 60 per cent)
	cardiorespiratory monitoring
	short-term intra-arterial blood gas monitoring
	non-invasive blood pressure monitoring
	close observation (for example neonatal abstinence syndrome)
	short-term ventilator care pending transfer (less than six hours).
Specialty services:	exchange transfusion
	nasal CPAP.

Availability will vary between hospitals. Not all units will have protocols established to provide all services. Protocols developed must be consistent with relevant guidelines (for example, *Administration of nasal continuous positive airway pressure (CPAP) in non-tertiary Level 2 nurseries*, developed by the Neonatal Services Advisory Committee, Victoria). Where provided, services should be undertaken following consultation with a tertiary centre.

Neonatal services guideline Level 3 = Capability framework Level 6		
As above, and in addition:		
All newborn infants requiring neonatal intensive care including infants:		
	requiring continuing assisted ventilation via an endotracheal tube, and for the 24 hours following endotracheal tube removal	
	requiring oxygen therapy (more than 60 per cent) for more than 4 hours	
	with tracheostomies requiring IPPV or CPAP	
	requiring a nasopharyngeal tube (without CPAP) to maintain airway patency	
	requiring an arterial line for continuing blood gas and/or blood pressure monitoring	
	having frequent seizures	
	undergoing major surgery, on the day of the procedure and for 48 hours postoperatively, including:	
		any procedure where a body cavity is opened
		repair of neural tube defect
		placement of a ventriculoperitoneal shunt or temporary ventricular drainage device.
	undergoing tracheostomy on the day of the procedure and for five days thereafter	
	with long gap oesophageal atresia awaiting definitive or palliative surgery – requiring 1:1 nursing care.	

Appendix 4

Support for maternity and neonatal services

In Victoria a range of initiatives have been implemented to support maternity and neonatal services, including:	
A statewide collaborative workforce initiative with targeted strategies for recruitment and retention of maternity health care clinicians and optimal use of workforce skill mix.	
Maternity services education programs	Maternity Emergency Education Program (multidisciplinary training for maternity emergencies).
	Intrapartum Fetal Surveillance Education and Credentialling Program.
	ANEW – A new approach to supporting women in pregnancy.
	Hepatitis C and HIV counselling course.
	Victorian Midwifery Refresher Program.
	Pregnancy Care Program.
Neonatal services training programs	NETS Education Program.
	The Victorian Neonatal Handbook.[11]
	Victorian Newborn Resuscitation Program.
Tools to support and underpin clinical review and quality improvement	Annual reports provided to every hospital in the state on site specific outcomes and performance of maternity services benchmarked across the state; produced by the Victorian Perinatal Data Collection.
	Victorian Maternity Services Performance Indicator Report.
	Annual reports from the Consultative Council on Obstetric and Paediatric Mortality and Morbidity.[14]
MNCN: established in August 2007, to provide support in a number of ways, including	Dissemination of clinical guidelines and protocols.
	Dissemination of evidence-based practice.
	Assistance with continuous quality improvement activities.
	Advice on utilisation of new technologies.
	Development of models of care.
	Assisting clinical participation in decision making and policy development.
	Developing links between health services.

Appendix 5

Birth pack contents

Equipment required in birth pack (for imminent birth):
towels
two metal clamps (to clamp cord)
one pair scissors (to cut cord)
identification label for baby
container for placenta (ice cream container ideal)
syntocinon 10 units (needs to refrigerated).

Appendix 6

Recommended equipment and drugs for resuscitation of the newborn infant

These should be available in the delivery areas of all hospitals where newborn infants are born[15]	
Equipment	firm, padded resuscitation surface
	overhead warmer
	light for the area
	a source of medical oxygen
	a source of medical air (if possible)
	clock with timer in seconds
	warmed towels or other covering
	polyethylene bag, or wrap, big enough for a baby less than 1500g birth weight
	stethoscope, neonatal size preferred
	suction catheters (6F, 8F, 10F, 12F)
	oxygen supply (flow rate of up to 10 L/min) with flow meter and tubing
	portable oxygen cylinders if needed
	oxygen mask to supply free flow oxygen (optional)
	face masks (various sizes)
	oropharyngeal airways (sizes 0 and 00)
	positive-pressure ventilation can be given by either: a T-piece device: self-inflating bag with an oxygen reservoir and a manometer if available; flow-inflating bag with a pressure safety valve and manometer
	laryngoscopes with straight blade (00, 0, 1), spare bulbs and batteries
	endotracheal tubes (sizes 2.5, 3, 3.5 and 4 mm ID)
	endotracheal stylet or introducer
	magill forceps, neonatal size
	supplies for fixing endotracheal tubes and IVs (e.g. scissors, tape)
	end-tidal carbon dioxide detector (to confirm intubation)
	meconium suction device (to apply suction directly to endotracheal tube)
	feeding tubes for gastric decompression
	umbilical vein catheterisation set and umbilical catheters (5F) with suitable skin prep solution
	syringes with needles (assorted sizes)
	intravenous cannulae (assorted sizes)
	pulse oximeter (optional).
Drugs	Adrenaline: 1:10,000 concentration (0.1 mg/mL)
	volume expanders: Normal saline, 0 Rh –ve blood needs to be readily available for a profoundly anaemic baby
	Sodium bicarbonate: 0.5 mmol/mL solution (4.2 per cent concentration, or diluted 8.4 per cent)
	Naloxone hydrochloride: 400 micrograms/mL solution
	sterile water for injection.

Appendix 7

Resource contacts

Useful resources	
Drug information	Monash Drug Information Services (03) 9594 2361 Business hours 9-5pm Monday – Friday
	The Women's Drug Information Centre (03) 8345 3190 Business hours 9-5pm Monday – Friday
Drug and alcohol services	The Women's Drug and Alcohol Services (WADS) (03) 9344 3631
	Alcohol Drug and Pregnancy Team (ADAPT), Southern Health (03) 95945628
Mother baby psychiatric units	Southern Health Mother Baby Unit (Monash) (03) 9594 1414 (Covering South and South- East Victoria)
	Banksia House - Austin Health (03) 9496 6407 (Covering North and North– East Victoria)
	Werribee Mercy (03) 9216 8465 (Covering West Victoria)

References

1. Department of Human Services 2002, *Future directions for Victoria's maternity services*, State Government of Victoria, Melbourne.
2. Committee on Perinatal Health 1976, *Toward improving the outcome of pregnancy: recommendations for the regional development of maternal and perinatal health services*, National Foundation-March of Dimes, New York.
3. Lemnos, JA & Lockwood, CJ (eds) 2007, *Guidelines for perinatal care*, 6th edn, American Academy of Pediatrics & The American College of Obstetricians and Gynecologists.
4. National Health and Medical Research Council 1978, *Report of the eighty-fifth session maternal health (standing) committee, appendix VI: organisation of perinatal services*, Australian Government, Canberra.
5. Department of Human Services 2004, *Rural birthing services, a capability based planning framework*. State Government of Victoria, Melbourne, viewed 21 January 2010, <http://www.health.vic.gov.au/ruralhealth/hservices/rural_planning_frameworks.htm>.
6. Department of Human Services 2005, *Neonatal services guidelines: defining levels of care in Victorian hospitals*, State Government of Victoria, Melbourne, viewed 15 January 2010, <http://www.health.vic.gov.au/neonatal/servicesguidelines.htm>.
7. Royal Australian and New Zealand College of Obstetricians and Gynaecologists 2009, *RANZCOG guideline: suitability criteria for models of care and indications for referral within and between models of care*, C-Obs 30, Royal Australian and New Zealand College of Obstetricians and Gynaecologists, East Melbourne, viewed 19 January 2010, <http://www.ranzcog.edu.au/publications/statements/C-obs30.pdf>.
8. Australian College of Midwives Inc 2009, *National midwifery guidelines for consultation and referral*, 2nd edn, Australian College of Midwives Inc, Canberra.
9. Mercy Hospital for Women, Southern Health & Royal Women's Hospital 2006, *3 centres consensus guidelines on antenatal care*, Mercy Hospital for Women, Southern Health & Royal Women's Hospital, Melbourne, viewed 5 January 2010, <http://www.3centres.com.au/guide_frame.htm>.
10. Royal Australian and New Zealand College of Obstetricians and Gynaecologists 2009, *RANZCOG college statement: timing of elective caesarean sections*, C-Obs 23. Royal Australian and New Zealand College of Obstetricians and Gynaecologists, East Melbourne, viewed 28 January 2010, <http://www.ranzcog.edu.au/publications/statements/C-obs23.pdf>.

11. Department of Human Services 2008, *Design guidelines for hospitals and day procedure centres*, State Government of Victoria, Melbourne, viewed 8 January 2010, <http://www.healthdesign.com.au/vic.dghdp/>.

12. Australian and New Zealand College of Anaesthetists 2008, *Recommendations on minimum facilities for safe administration of anaesthesia in operating suites and other anaesthetising locations*, Australian and New Zealand College of Anaesthetists, Melbourne, viewed 19 January 2010, <http://www.anzca.edu.au/resources/professional-documents/pdf/T1.pdf>.

13. Royal Australian and New Zealand College of Obstetricians and Gynaecologists, Australian and New Zealand College of Anaesthetists, Royal Australian College of General Practitioners & Australian College of Rural and Remote Medicine 2009, *Position statement on the provision of obstetric anaesthesia and analgesia services*, WPI 14. RANZCOG/ANZCA/RACGP/ACRRM, viewed 28 January 2010, <http://www.ranzcog.edu.au/publications/statements/wpi14.pdf>.

14. South Australia Department of Health 2009, *Standards for maternal and neonatal services in South Australia*, revised edn, State Government of South Australia, Adelaide.

15. Australian Resuscitation Council, 2009, Neonatal Guidelines, Australian Resuscitation Council, Melbourne, viewed 14 January 2010, <http://www.resus.org.au/policy/guidelines/index.asp>.