

Rural Birthing Services

Rural & Regional Health Services Branch

DISCUSSION PAPER

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Table of Contents

INTRODUCTION	4
BACKGROUND	4
OBJECTIVES	5
A CRITERIA BASED FRAMEWORK	6
Role Delineation	6
The Proposed Framework	6
RURAL BIRTHING SERVICE ACTIVITY	8
Regional Self-Sufficiency	9
Type of Delivery	10
Birthing Services by Hospital Group	10
Private Birthing Services	11
PLANNING FOR SERVICE PROVISION	12
Decision Making: Health Service Governance	12
Decision Making: Clinical Team Work & Cooperative Arrangements	12
Decision Making: The Individual & Informed Consent	12
Decision Making: Community Involvement	13
Quality of Care and Patient Safety	13
Service Sustainability	13
Workforce	14
Complex Services	15
Medical Indemnity	15
Travel Distance	15
PROPOSED CRITERIA FOR A RURAL BIRTHING SERVICE	17
WHERE TO FROM HERE	23
APPENDIX 1: POSSIBLE CLINICAL GUIDELINES / CRITERIA FOR A LOW RISK BIRTHING SERVICE	25
REFERENCES	31

Introduction

The Victorian Government is committed to the continued provision of safe and high quality birthing services in rural and regional Victoria, as this is seen as an essential component of a comprehensive health system. To support this objective, this Discussion Paper has been prepared to summarise the issues relevant to the provision of birthing services in rural and regional hospitals. The paper is intended to stimulate discussion that will lead to the development of an agreed framework of minimum standards to support optimal birthing services in Victoria.

The paper is not designed to provide a detailed role delineation framework for birthing services, nor does it describe or recommend particular models of care. It will endeavour to complement rather than duplicate work being undertaken elsewhere, such as within the Maternity Services Program.

The paper recognises that workforce recruitment, retention and ongoing training are major issues influencing service viability. The ongoing availability of both rural doctors able and willing to provide obstetric services and midwives is of significant concern. However, this paper does not propose how workforce issues and ongoing training needs will be addressed, as these are the subject of other work being undertaken at both state and commonwealth levels.

The intention of the framework proposed in this paper is to assist rural health agencies make decisions on the structural and functional appropriateness of their birthing services. The framework will be relevant to all rural birthing services, from the small rural centres to the larger regional referral hospitals. While the levels of complexity and acceptable risk can be expected to vary over the range of hospitals, in each case the birthing service provided should work within the recommended framework.

A number of rural hospitals have already made the decision not to offer birthing services. In these cases the proposed framework would encourage those services to ensure that at least referral protocols and an emergency transfer system is in place to manage those potential times when a woman does present to the hospital either in late pregnancy or in labour.

The components of the framework and initial criteria proposed in this paper are for further consideration and refinement by those involved in the provision of birthing services, including the obstetricians, midwives, general practitioners and other staff providing this care in rural Victoria.

Background

The long-term viability of all existing birthing services is a relevant planning issue, with many rural services managing only small numbers of births over past years. While actual volume is not the only indicator of viability, the ability of clinical staff to maintain appropriate levels of expertise, with the capacity to respond to obstetric emergencies, remains a concern to the Department of Human Services, and a challenge to both health services and to the staff themselves. The resources and infrastructure required to maintain the services is also an issue where there are few births.

Hospital service plans are reviewed and updated on a regular basis to ensure services provided are consistent with the hospital role and clinical best practice and accurately reflect demand within the catchment community. There have been examples of service plan reviews that have recommended the cessation of birthing services in agencies with low and declining volumes, based on perceived concerns with the quality of service provision and patient safety. These decisions have been made on an individual hospital basis without clear role delineation guidelines or an accepted framework within which to consider service provision.

In late 2001 one such recommendation to cease birthing services at a small health service in rural Victoria led to community concern and opposition. This resulted in the appointment of an Independent Advisory Team to review the provision of obstetric or birthing services in the area. The findings of the Advisory Team were then seen as providing a solid basis for consideration of birthing services in other similar rural hospitals.

An important finding of the Independent Advisory Team was that volume alone was not a primary indicator when determining the ability of rural health services to provide birthing services. However, it was noted that low numbers of births did impact on the ability of staff to maintain the necessary skills and expertise. The Advisory Team therefore recommended that small rural services should focus on the provision of a birthing service for women classified as 'low-risk' only. The team outlined a range of recommendations or criteria that, when met, would ensure a rural birthing service of an acceptable standard.

The criteria included consideration of minimum staff numbers, for both midwives and medical staff, and the necessary support and maintenance of skills in both groups. Specific criteria also referred to medical credentialing and clinical privileges, together with provision of appropriate equipment and infrastructure to support the service.

The Team recommended developing hospital specific birthing service admission criteria as a matter of urgency to define a pregnancy as 'low-risk'. These key criteria should include a set of transfer criteria and be agreed with all relevant parties, including medical and midwifery nursing staff. Implementation should be assisted through the hospital's documented operational policies and protocols.

The development of criteria for a quality service assures the basis for the continued provision of safe rural birthing services.

Objectives

Following the recommendations of the Advisory Team, this Discussion paper expands on the concept of a framework of criteria to define a minimum standard. However, rather than focus exclusively on 'low-risk' cases, the framework now needs to be broader, to encompass the full range of birthing services provided in rural Victoria.

The agreed framework will be based on the best clinical/cost effective model, with appropriate criteria in place to assure continuity of services of a safe and high quality standard in rural Victoria. The framework aims to encourage a more consistent approach to clinical risk management and the implementation of evidence-based care to reduce health service risk, clinician risk and improve patient safety.

The framework is intended to address the basic issue facing services in rural areas, which is whether a birthing service is viable both now and in the future. The corresponding issue is then what level of birthing service is appropriate to the health service. To assist health services to make an informed decision the framework will define the minimum standards in terms of structures, protocols and service arrangements that need to be formally put in place to ensure service continuity.

The discussion paper provides a proposed framework, which will form the basis for further discussion and review. The outcome of this work will be an accepted framework for Victorian rural obstetric and midwifery services. The guidelines will ensure that rural birthing services are provided where it is safe and appropriate to do so, and will provide a clear structure within which local decision making can be supported. It is hoped that the framework will also foster the continued development of collaborative relationships between health services.

A Criteria Based Framework

Role Delineation

Role delineation guidelines for birthing services have already been developed and implemented in other States, either as individual reports as in Western Australia¹ or incorporated within overall service guidelines such as in New South Wales² and Queensland.³

These formal role delineation frameworks have been adopted to describe the interrelation between core and support services and to define the role a hospital can play in the service system. A similar framework has been considered for Victoria and while some projects have progressed this approach, a statewide framework has never been formally put in place. The interstate frameworks generally define and prescribe levels of care, based on definitions of service standards. While this is a valuable approach it can tend to describe or classify services as they currently exist, so confirming the levels of care available. In some cases there is the potential for this to be seen as a way to limit services rather than to respond best to service needs in the local community.

The proposed Victorian approach will differ in that it will not define levels of service, but will be based on a framework as recommended by the Independent Advisory Team. This alternative approach seeks to outline the optimal service mix and profile required to meet minimum standards. This approach is more along the lines of a Service Capability Framework, as has been proposed for implementation in Queensland⁴.

The Proposed Framework

A number of concepts can be defined as being important in health system performance planning and service delivery. The Victorian framework will particularly examine in detail the issues of:

- safety,
- accessibility,
- sustainability.
- timeliness and
- service integration

The proposed service framework will define the prerequisite criteria required to provide an appropriate level of service. The ability of each individual agency to offer a birthing service of a certain level would then depend on the ability to meet these criteria. If it can be demonstrated that the agreed criteria can be met, then the service would be supported.

This approach moves the focus from actual numbers of births, or a numerically based framework, to one of service quality. It will not rely solely upon numbers of patients treated, number of births or size of population serviced.

The criteria will need to be relevant to all birthing services in rural areas, as the system needs to work collaboratively to support services for local communities. Therefore, while the concept of low-risk and high-risk may be defined, it will be more important for each hospital to identify the level of risk acceptable to their own particular circumstances and ensure strategies are in place to manage both the expected and unexpected transition along the risk continuum.

The criteria will be built around:

1. Defined catchment area of the health service

- Demographic mix
- service accessibility
- consumer preference

2. Clinical Staff

- minimum staffing arrangements, including access to medical, midwifery and allied health staff. This may vary according to models of care
- qualifications
- appropriate clinical experience
- ongoing relevant training to maintain skills
- the credentialing and clinical privileges process

3. Defined clinical guidelines

- determined in accordance with conditions and services at each hospital
- based on complexity of service delivery: with consideration of acceptable risk at stages along the continuum from low-risk to high-risk
- based on risks identified at each stage: Antenatal, Pregnancy, Intrapartum, Postpartum
- include patient referral and transfer protocols

4. Quality Standards

- work practices – models of care
- evaluation processes – accreditation and service reviews
- clinical risk assessment
- clinical governance

5. Support Services

- infrastructure and equipment required
- minimum support services, such as pathology and pharmacy services

Accepted rural birthing service criteria, with an appropriate understandable plan of action, will give consumers, service providers and the Department of Human Services a fair, equitable and transparent planning framework. This will assist hospital boards and clinicians to plan and implement an appropriate birthing service, designed to produce the best patient outcomes. To support transparency of local decision making it is essential that the community is involved closely and advice sought.

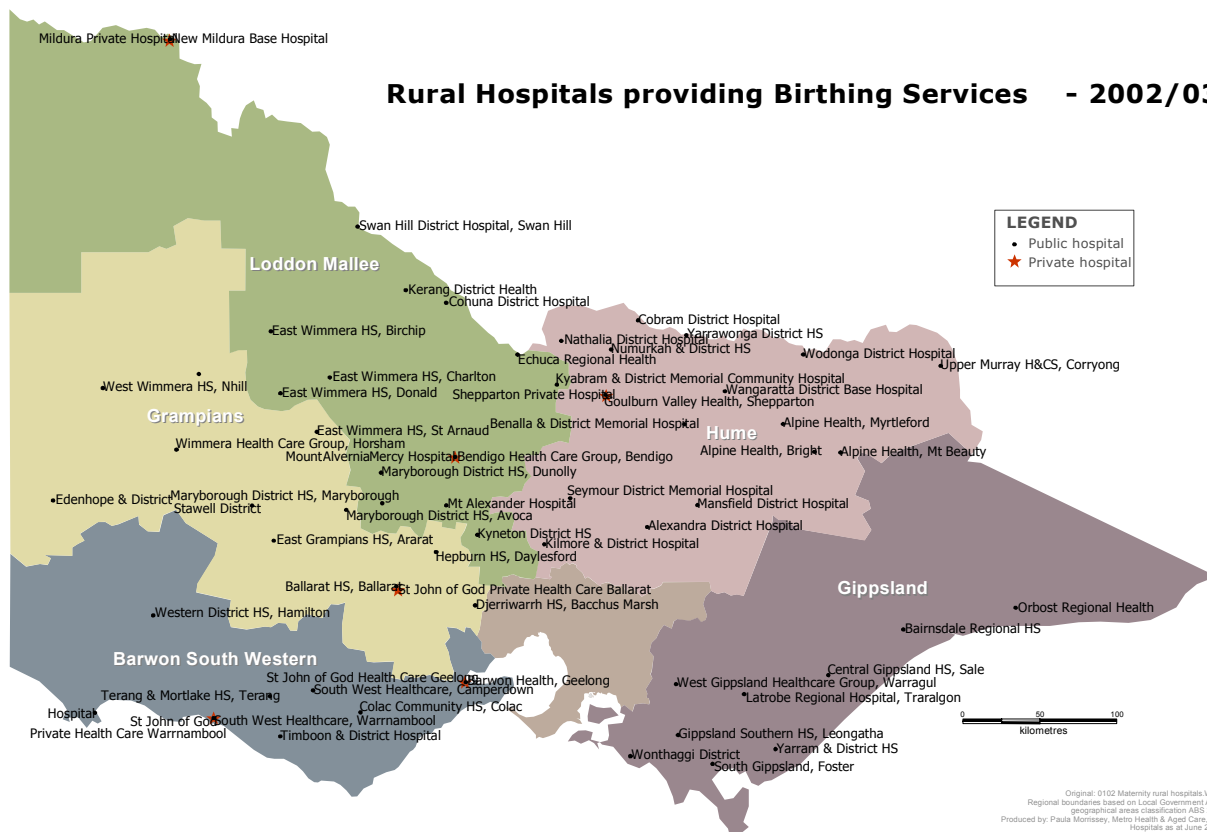
With local decision making also comes accountability, so health services will need to respond to the identified criteria by either taking steps to achieve the standards set or by electing to modify the services offered. The framework developed will recognise that there are different service configurations throughout the state and thus will provide some flexibility to meet local community requirements. However, where there is a clear departure or variation from the recommended framework, there will be the expectation that the health service concerned will develop an appropriate risk management strategy.

The rural birthing service framework should consider the community as a whole to ensure all appropriate levels of care can be provided to the population. All relevant health agencies need to work together within a coordinated system of care, with the role of each agency agreed and defined, rather than simply focus on each hospital individually. This is particularly relevant to rural areas where health services can have overlapping catchment areas for differing levels of service. Where services need to be limited it is also essential that all parties understand what other options are available. Relationships between all services in an area must be developed and clinical protocols, processes and referral pathways put in place to make sure the community needs are met.

For successful implementation of a criteria based framework at agency level all participants, including the community, must be comfortable with the arrangements, recognise the associated costs and time commitments and be supportive of all staff involved.

Rural Birthing Service Activity

Maternity services constitute a reasonably significant activity in Victorian rural hospitals, with births occurring in 55 or 57% of the public rural and regional agencies¹ providing acute inpatient services.



Analysis of rural and regional activity for 2002/03 indicates that there were 13,954² separations from public hospitals in which an actual birth occurred. An additional 5,424 separations were also coded to the specialty of obstetrics, which includes antenatal and postnatal care. Within each individual hospital the proportion of inpatient activity related to obstetric services varies from a high of 10.8% of separations in one hospital to a low of less than one percent. The average is 5.3% of all rural and regional hospital separations. The proportion of beddays used is similar, with a range from 14.1% to a less than one percent. The average of bed days used for obstetric services is 4.7%.

However, there is reasonable concentration of public obstetric services in rural areas. When agencies are grouped to quartiles the highest represents 76% of birthing activity and the lowest just 0.8% of rural birthing activity.

Table 1: Rural Birthing Services (VAED 2002/03)

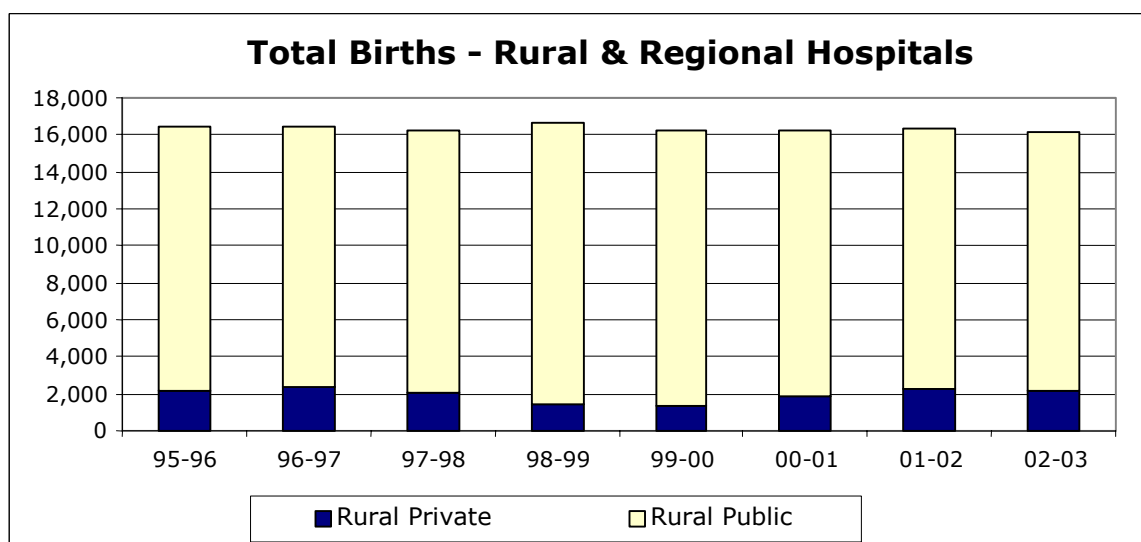
	Number of Agencies	% of Agencies	Range of Birth Numbers	% of Births
1st Quartile	14	25.5%	334 – 1,627	75.6%
2nd Quartile	14	25.5%	102 – 294	17.6%
3rd Quartile	14	25.5%	34 – 82	6.0%
4th Quartile	13	23.6%	1 – 23	0.8%
TOTAL	55			100%

¹ Agencies include all public health services at campus level.

² Data Source: Victorian Admitted Episode Dataset (VAED) 2002/03 Year to Date - August extract

Over the past seven years the total number of births in rural agencies has remained reasonably constant, but with a slight decrease over the last year from 16,349 in 2001/02 to 16,129 in 2002/03. Within that total, public separations decreased from 14,241 in 1995/96 to 13,954 in 2001/02. The similar trend is in private hospitals, where separations had decreased from 2,204 in 1995/96 to 2,175 in 2002/03.

The total length of stay for public rural and regional services has declined over that time period from 4.7 days to 3.9 days. In contrast, the average length of stay in private hospitals is 5.9 days, but this has also declined from a high of 6.8 in 1995/96.



The decreased activity within the rural hospitals is representative of the total decrease in births to women in rural areas. In 1995/96 there were 16,669 births to residents of rural regions, but in 2002/03 this has reduced by 6.6% to 15,564.

During 2002/03 no births were recorded in 19 rural hospitals that had offered an birthing service within the previous seven year period, indicating both changing service mix, implementation of birthing criteria and decreasing demand in particular areas, primarily because of demographic changes rather than government intervention. In other words, each of the rural regions appears to have adjusted to these changes to produce "a steady state" in terms of births occurring in that region.

Regional Self-Sufficiency

Most rural deliveries are undertaken within the maternal region of residence, which demonstrates reasonable self-sufficiency at the regional level.

Table 2: Rural Regional Self-Sufficiency: Percentage of obstetric separations undertaken within the maternal region of residence (VAED 2002/03)

Region of Residence	Births (N)	Public Hospitals		Births (N)	Private Hospitals	
		% of Births within region of residence	% of births at metropolitan hospitals		% of Births within region of residence	% of births at metropolitan hospitals
Barwon SW	2,870	96.7%	3.0%	1,082	97.0%	2.7%
Grampians	1,765	90.2%	4.6%	544	84.9%	6.3%
Loddon Mallee	2,874	89.7%	6.1%	666	76.1%	21.2%
Hume	2,926	89.0%	9.0%	112	19.6%	75.0%
Gippsland	2,659	95.6%	4.4%	66	0.0%	100%

Table 2 demonstrates that from 89.0% to 96.7% of rural public hospital births occur within the region of residence. This indicates that in most cases birthing services can be provided in either the local hospital, or a hospital in the nearby area. Where an alternative birthing centre is chosen, this is often more likely to be in the metropolitan area than it is to be in a neighbouring rural or regional area.

The lower level of private sector self-sufficiency within some regions is a result of the limited numbers of private facilities offering birthing services in rural areas.

Type of Delivery

The rates of types of deliveries have some variations between regions, but are largely consistent with the Victorian average. The caesarean section rate in rural public hospitals averages 24.7%, which is only slightly lower than the average rate in metropolitan areas. This is relatively consistent across regions, but there was some inter-hospital variation, with one small public hospital recording a rate of 47.6%.

Table 3: Type of Birth by Region (VAED 2002/03)

Region of Residence	Public Hospitals		Private Hospitals	
	% Vaginal Deliveries	% Caesarean Sections	% Vaginal Deliveries	% Caesarean Sections
Barwon SW	75.6%	24.4%	72.5%	27.5%
Grampians	72.9%	27.1%	64.5%	35.5%
Loddon Mallee	75.9%	24.1%	65.4%	34.6%
Hume	75.4%	24.6%	0.0%	100%
Gippsland	75.9%	24.1%	0.0%	0%
RURAL	75.3%	24.7%	68.0%	33.0%
Western Metro	70.0%	30.0%	60.5%	39.5%
Northern Metro	75.6%	24.4%	66.0%	34.0%
Eastern Metro	77.3%	22.7%	67.0%	33.0%
Southern Metro	81.5%	18.5%	71.8%	28.2%
METROPOLITAN	74.5%	25.5%	66.3%	33.7%

Fourteen hospitals providing for at least some births did not undertake any caesarean sections in 2002/03. Of these, six were very small units provided less than 5 births. Of the remaining eight hospitals that provide only vaginal deliveries, it would appear that collaborative arrangements with hospitals in the surrounding areas have been put in place for patient transfer when delivery by caesarean sections is deemed appropriate. In many cases the policy decisions to offer only vaginal deliveries were made by these hospitals some years ago, with analysis of data back to 1995/96 indicating no caesareans have been performed. This concept of risk management and patient transfer to more appropriate settings is an important service management approach, which should be considered by all agencies.

Birthing Services by Hospital Group

Analysis of inpatient activity for 2002/03 demonstrates that Group B hospitals in each of the rural regions provide a substantial birthing service. These hospitals can be expected to provide the full range of services, including caesareans and assisted deliveries and take referrals of more complex cases from smaller surrounding hospitals.

All Group B hospitals provided births in excess of 195, ranging from Barwon Health with the highest number at 1,627 to Western District (Hamilton) with 195. All hospitals also undertook a substantial number of caesarean sections, with rates ranging from 34.3% at Wimmera Health Care Group (Horsham) to 15.6% for West Gippsland (Warragul). The average caesarean section rate for the group was 25.4%.

Most Group C hospitals also provide a birthing service, with some births occurring at 12 of the 19 health service campuses. Numbers of births varied from 417 at Djerriwarrh (Bacchus

Marsh) on the metropolitan fringe, to 21 at West Wimmera (Nhill). In the main these are medium sized services, with caesarean sections performed at all but Mt Alexander (Castlemaine). The caesarean section rate was 24.5% for the group, but this varied from 47.6% at West Wimmera (Nhill) to 19.8% at Maryborough.

The smaller rural services can be expected to provide a more limited birthing service, with referral relationships with regional services to support complex care as required. Of the 24 Group D hospitals, seven do not provide a birthing service and six undertook 15 or less deliveries. The remaining eleven hospitals provided a birthing service with the number of births ranging from 183 in Seymour to 34 at the Hepburn Health Service (Daylesford). Seven of these hospitals do not provide for caesarean sections and a further four provided less than five. The average caesarean rate for the group was 18.9%, with the range from 31.3% at Kyneton to 1.2% (one caesarean only) at Yarrawonga.

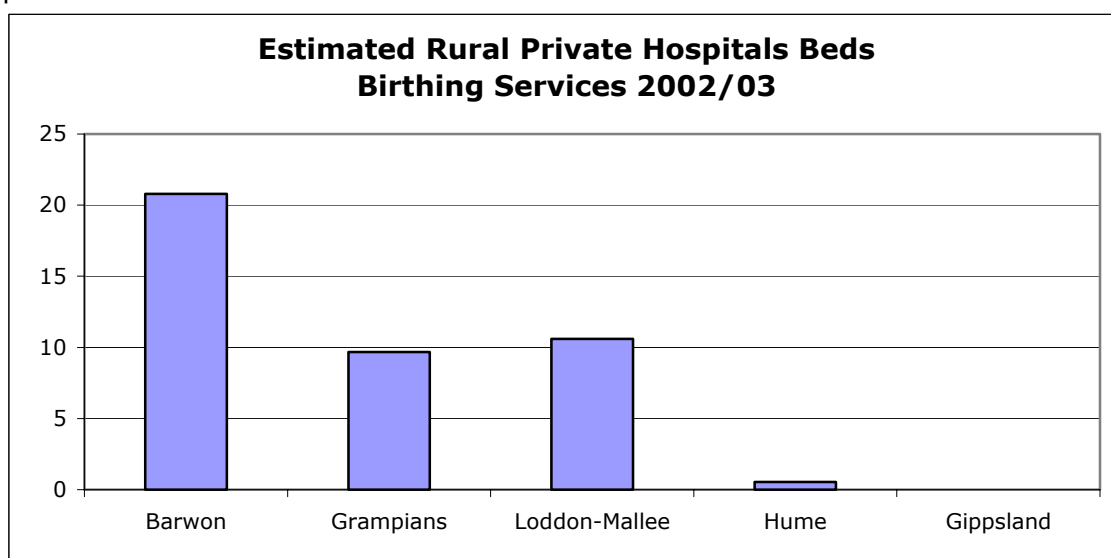
Of the Group E hospitals, only South Gippsland Hospital (Foster) and the East Wimmera Health Service at Birchip provide a birthing service. Birchip undertook 39 deliveries of which 11 (28.2%) were caesareans and South Gippsland 78 of which 23 (29.5%) were caesarean sections.

Of the Multi-Purpose Services (MPS), six campuses provide birthing services. Timboon provided the highest number at 67 of which 8 (11.9%) were caesareans, and Upper Murray (Corryong) provided the least with 4. Alpine Health provided for 49 births across its three campuses, but no caesarean sections.

This grouping gives some guide to how birthing services should be configured in rural Victoria, given that the expectations of the community are to have access to the full range of obstetrics care (antenatal, intrapartum and post-partum), with access to epidural anaesthesia and high quality neo-natal care.

Private Birthing Services

There are 22 private hospitals in rural areas, but only six of these provided birthing services during 2002/03. Almost half of all birthing services were provided by two hospitals in the Barwon South West region, in Geelong and Warrnambool. There are also private hospitals in Ballarat, Bendigo and Mildura providing some birthing services, however the private hospital in Mildura ceased this service in August 2003. There is one private hospital in Hume Region, which provides for caesarean deliveries only and no private hospital offering birthing services in Gippsland.



Data Source: VAED 2002/03. Modelled from actual beddays at 85% occupancy

Planning for Service Provision

Decision Making: Health Service Governance

Health Service Boards of Management should have a clear understanding of the comprehensive health needs of the local community and whether or not the expectations thus generated can be met by the local hospital. The decision about whether or not a birthing service is to be provided should therefore be made by each Health Service Board. This ensures the autonomy of hospitals to make decisions about the service mix which will best meet the current and forecast needs of the community they serve.

Decision making must take into account what services are available in the region and in the immediate catchment area. It is important that the services planned are those that will best meet the identified needs of the local community, so the population profile will assist in determining the service profile. When the major health service needs of the community are clearly understood it will be evident whether or not a birthing service is a justifiable clinical service to which significant resources should be directed.

Health services thus can ensure decisions are made in the context of the health system as a whole and encourage the development of relationships and formal documented referral and transfer arrangements with other health services. This can ensure the best outcomes for patients, staff and the community.

Decision Making: Clinical Team Work & Cooperative Arrangements

The confidence of clinical staff to meet quality standards will be enhanced by the adoption of clear and agreed clinical guidelines for the birthing service. These are particularly valuable when a crisis occurs and the decision has to be made whether or not to transfer the woman in labour to a larger centre better equipped to manage the current condition.

Clear treatment and referral protocols should help with rational decision making. Without agreed and accepted guidelines, the confidence of clinical staff in their ability to cope will vary between staff. For example, a midwife may feel the patient's condition is changing from low risk but another clinician may feel confident he/she can manage. This divergence can cause tension between staff and waste valuable time in arranging patient transfer.

Decision Making: The Individual & Informed Consent

The framework will identify and list common obstetric problems that may occur late in pregnancy or during labour to assist in the development of appropriate, consistent and agreed contingency plans. These plans should be adapted depending on local issues and available staff, including leave arrangements.

It is important that potential problems are identified and discussed with each woman and, where appropriate, with her partner or family prior to the onset of labour. Each woman and her family must have the opportunity to be fully informed of the services that are available and those that may not be available in the health service, such as epidural anaesthesia and emergency caesarean section. Any discussion should also include full explanation of the risk surrounding an urgent transfer in the event of complications arising.

If a woman then chooses to birth in a low-risk environment, she must acknowledge the risks inherent in so doing. These communications and discussions should be fully documented during the pregnancy, preferably before 34 weeks, and this documentation will assist the formal process of informed consent.

Decision Making: Community Involvement

Access to birthing services in small rural communities can be difficult when the demand is not sufficient to sustain a comprehensive service. The challenge is to find the balance between access to services and an acceptable level of risk within the context of community involvement.

Changes to service provision, particularly in small rural services, can be met with resistance if the community perception is that services are being withdrawn. As a health service decides to implement or change admission criteria for birthing women, the hospital must ensure that there is consultation with the staff and the community, with adequate information in relation to the decision making. Where health services have a Community Consultative Committee in place communication could be facilitated through the committee. Alternatively the health service should develop a community awareness and education program.

Further information about how community consultation can assist service planning in rural and regional communities can be obtained through the publication *A Guide to Community Consultation in Rural and Regional Communities*⁵.

Quality of Care and Patient Safety

Rural Victorians need access to appropriate health services and a sense of community safety and confidence in their local health providers. Rural patients need to be assured that the standard of services received is comparable to that received by their metropolitan counterparts. The adoption of a criteria based framework will enable rural hospitals to demonstrate to their local communities that the services they provide are safe and of an accepted and appropriate standard.

The quality of care and safety of patients must be such as to ensure clinicians and hospitals maintain professional standards. The achievement of safer practices and better outcomes in maternity services requires commitment from both individuals and the health service to ongoing training to assure clinical competency, continuing professional education and service review processes.

While it may not be possible to eliminate all potential adverse outcomes from a pregnancy and/or birth, it is possible to eliminate preventable adverse outcomes and reduce the likelihood of other adverse events occurring. Good clinical management means that care is provided by the most appropriate qualified health professional or team of professionals, in the most appropriate setting, and is, as much as possible, in accordance with the wishes and aspirations of the pregnant woman and her family.

Clearly established guidelines and protocols can reassure women who would prefer to deliver their babies close to home that the service they receive meets standards and that if travel to a larger regional centre is recommended this will be based on appropriate clinical criteria.

To assist service sustainability, the Department of Human Services has a number of projects in place through the Maternity Services Program. This includes the *Three Centres Consensus Antenatal Guidelines* project, which has provided a forum for discussion of maternity issues through workshops for GPs, obstetricians and midwives in major regional centres.

Service Sustainability

Obstetric services are not a major component of services in many rural hospitals. The service constitutes up to 10% of separations in a couple of centres, but the rural average is five percent of both separations and beddays. An important consideration for hospitals and health services is therefore the long-term sustainability of a birthing service. The population mix and

current service trends will give some indication of the long-term viability of a service, particularly where demand is decreasing.

The cost of maintaining services to an agreed minimum standard may be problematic in areas with low numbers of births, but cost is only one of the major issues if the demand is there and the service can meet the criteria determined and can sustain that service.

The decision to provide an obstetric or birthing service can have an impact on the viability of the total health service and the ability to attract medical and nursing staff, where the ability to attract and retain staff is linked to the provision of a range of services. Any potential limits to services can endanger the viability of the hospital if clinical staff then choose to leave the area.

Some rural health services are implementing new staffing arrangements to continue services using a mix of on-call and rostered midwifery staff. It is anticipated that new and innovative ways of service provision will be examined in the course of implementing the *Rural Maternity Initiative*⁶.

Where small hospitals have dedicated resources for maternity services, such as an identified unit or ward area, this can impact on service flexibility and the ability to respond to changing service demand over time. Depending on local need, the beds and theatres may be better utilised for a broader range of patient needs. Hospital redevelopments need to be cognisant of this when reviewing the service requirements and the physical design and layout of the hospital.

Sustainability of services is also influenced by the ability to fully utilise all related services. The development of networks and supportive relationships between larger and smaller regional centres can assist the continuation of local birthing services, where arrangements can be put in place for outreach support, expertise and education.

For instance, collaborative arrangements support circumstances where a small rural hospital can provide antenatal and postnatal care, with the actual birth occurring in a larger regional centre. Clear referral and transfer protocols are essential to support this service model.

Potential planning decisions to relocate or consolidate services to a larger neighbouring centre must be made with the input of all affected parties and cannot be made by one health service in isolation. The financial implications on both services must be analysed and long-term impacts considered. The cooperation of affected staff to ensure maintenance of services is also critical, with changes to working relationships and potential industrial impact important considerations.

Workforce

Development and maintenance of a competent and skilled workforce, especially where there are a low throughput is essential to ensure ongoing achievement of quality patient outcomes. Availability of a skilled workforce, both medical practitioners and midwives is essential. Many midwives working in rural and regional areas are nearing retirement, often with decreasing opportunities and/or enthusiasm for continuing education.

In addition, there are often limited opportunities for skill development and maintenance at centres with low numbers of births. The maintenance of professional skills is already a challenge in these rural areas and it is important that service developments support clinical staff as much as possible and do not further erode opportunities for development.

Current workforce initiatives can be broadly defined into two categories. These are:

- initiatives to facilitate the recruitment of health professionals and
- initiatives to retain existing practitioners.

A number of the recruitment and retention initiatives are focussed on rural Victoria as workforce shortages are exacerbated in rural and regional locations⁷.

A decision to continue provision of birthing services in rural areas, where the criteria for a high quality and safe service can be met, should result in a flow on effect for workforce retention. This decision, made on the basis that services are required and standards can be met, should give encouragement to both rural doctors and midwives to enter rural practice in the knowledge that their skills will be valued and utilised.

Complex Services

On a state-wide basis, super specialist or complex obstetric services are provided by The Royal Women's Hospital, The Mercy Hospital for Women and Monash Medical Centre. It is not envisaged that these complex services will be available in rural and regional health services.

Examples can include significant multiple births (3-4 plus) and management of pregnancy and birth for women with complex pre-existing or related medical conditions.

Medical Indemnity

In rural areas the majority of both medical care and birthing services are provided by GPs and GP-obstetricians. Boards of Management need to ensure that evidence of medical indemnity insurance is considered as part of the credentialing process and determination of clinical privileges.

The Victorian Government manages liabilities that arise from public hospital medical indemnity risks through an insurance program between DHS and the Victorian Managed Insurance Authority (VMIA). Cover under the program includes the corporate liabilities of the hospital arising from negligent medical treatment as well as the individual liabilities of persons for whom the hospital is legally liable, including the following:

- Employed and contracted doctors treating public patients;
- The Rural General Practitioner (GP) scheme for the public and private practice work performed at certain rural public and bush nursing hospitals by participating practitioners who have appropriate admitting rights; and
- In limited circumstances for private practice work of employed doctors covered under Dillon Fund or Special Purpose Fund arrangements.

However, the rural GP scheme does not extend to cover private work in private hospitals or larger regional public hospitals; and there is no provision for cover under any of the Department's insurance arrangements for private practice work performed by specialist fee for service Visiting Medical Officers (VMOs).

Further details on medical indemnity insurance, tort law reforms and state government initiatives can be obtained from www.health.vic.gov.au/medindemnity/index.htm

Travel Distance

Availability of transport options, including public transport, is often limited in rural areas. While people may well choose to travel to larger centres for all manner of services, including health care, their ability to do this easily should not always be assumed.

The risk of delivering in a small rural hospital, without ready access to a comprehensive range of support services, must be balanced against the alternative risks inherent in travelling

extended distances. Travel to neighbouring communities can also potentially isolate patients from their own community at a time when family and community support are important. If a health service cannot provide a safe, low-risk environment then travel is necessary and in an acute situation this will need to be by ambulance as an inter-hospital transfer. The NETS service is also available for emergency transport of either a woman before delivery or newborns.

The criteria proposed do not include definitive indicators of acceptable travel times or distances. However, the balance between the perceived quality of a larger centre and the longer travel time to access services must be considered.

Proposed Criteria for a Rural Birthing Service

As indicated, to assist Boards of Management to determine whether or not a birthing service should be provided, a clear and concise service delivery framework will be established and implemented.

In determining a framework for birthing services in rural Victoria, the focus should be on the desired health outcomes. This is ultimately the safe management of pregnancy, labour and birth, with the minimisation of avoidable adverse events. As such, both low-risk and high-risk birthing services need to be considered, as any pregnancy or birth determined to be low-risk has the potential to become high-risk during the process and women in the high-risk group can still have a normal birth, despite increased levels of intervention.

In the development of a birthing service framework, four critical periods need to be considered and services organised accordingly:

- Early Antenatal period: The requirement for early assessment of risk and identification of a potentially complex pregnancy. Referral to an alternative service should be organised if the level of complexity is higher than appropriate. The nature of the service preferred by the pregnant woman should also be determined at this time, including options for shared care and 'midwifery-lead' models.
- Management of pregnancy: This phase includes ongoing assessment of both maternal and fetal complexity and risk. Must also include the ability to deal with signs of fetal distress and organise later referral as appropriate.
- Management of labour and delivery: The ability to deal with signs of fetal distress is critical during this phase. This also includes capacity for induction and augmentation of labour and capacity to provide caesarean sections where required. Anaesthesia for both pain free and operative deliveries is required. Procedures and protocols for late referrals due to complications during labour are also required.
- Post Partum period: Provision of blood and blood products may be required. Related services include Neonatal facilities, equipment and transfer arrangements with NETS, Infant Welfare services.

As indicated, the framework will be built around:

1. Defined catchment area of the health service

There must be clear justification within the health service catchment population that the numbers of births projected over the next 5-10 years would justify and support the ongoing provision of a birthing service. However, service access is another factor to be considered, including the distances involved and the capacity of the population to travel to alternative hospitals.

2. Clinical Staff

Where birthing services are to be provided the staff and level of skill must be appropriate to the services provided. These practitioners must be available on-call and close to the hospital.

Medical Staff

General Practitioners provide most of the obstetric care in small rural health services. A specialist obstetrician may provide sessional consulting to these health services and be available for telephone consultation. Significant numbers of Overseas Trained Doctors (OTD) work in rural health services.

Hospitals offering a birthing service must have as a minimum:

- one or more medical practitioners available with skills and interest in obstetric practice to provide antenatal and postnatal care. The medical practitioners must be credentialed in Obstetrics with "on-call" arrangement organised to provide 24-hour cover
- An anaesthetist available to assist with caesarean sections and where appropriate assisted deliveries
- A paediatrician or a medical practitioner with paediatric experience.

Midwifery Staff Levels

Regional hospitals with a dedicated obstetric service should have a registered nurse with midwifery qualifications on every shift. This would provide a staffing mix of a registered nurse with postgraduate midwifery qualifications each shift over the course of a year. These services should also have access to registered nurses with midwifery qualifications and extensive experience for at least two years. There should also be available access to advice on lactation.

However, for hospitals with small numbers of births in a well managed local service, the midwifery staff levels should apply only when women are admitted in labour or require postnatal care. In these cases a midwife should be provided for each shift. When a midwife is not on shift there must be 24 on-call arrangements in place for the unexpected presentation of an obstetric patient.

Midwifery Practice

The ability to develop and maintain knowledge and skills in midwifery practice is difficult for practitioners from small rural areas. This is related to the small number of births that occur at some hospitals, the size of the workforce and the range of nursing tasks they are also expected to undertake. In many small rural hospitals the midwives can be the only Division 1 nurse rostered for the shift and have to care for both general patients and birthing women. This can act as a deterrent in the recruitment of midwives who wish to practice midwifery exclusively.

Hospitals with a large workforce potentially have a greater opportunity to provide a wider range of continuing education and professional development than small institutions.

Midwives in Victoria are guided in their practice according to the Code of Practice for Midwives in Victoria.⁸ This outlines the sphere of practice and responsibilities in which a midwife should practice. It is essential for health professionals to be aware of their responsibility to adhere to the code of practice and the annual registration renewal documentation is signed confirming this fact.

Allied Health

Hospitals must have, as a minimum, regular access to allied health staff, including a physiotherapist, social work and dietician. For larger, regional services these staff must be on site.

Training and Maintenance of Skills

All health care professionals are responsible for the care they provide and thus for the maintenance of their competencies.

There is also an obligation for all rural health services to provide support for education for all health professionals involved with the pregnant and birthing woman in at least the following areas:

- Normal progress of labour including CTG interpretation and appropriate recording
- Appropriate antenatal and postnatal care
- Identification and management of emergency situations including neonatal resuscitation

- Basic / advanced life support

It is incumbent upon Hospital Boards of Management and health service management to ensure that educational programs are available and or accessible to all relevant staff. In some rural health services this may include non-midwifery endorsed nurses attending training to enable them to provide assistance where only one midwife is rostered per shift.

Midwives

At present there is no mandatory requirement for midwives either as a member of the Australian College of Midwives Incorporated (ACMI) or as prescribed by the *Nurses Act 1993* to:

- undertake continuing professional development
- demonstrate continuing professional development
- care for a minimum number of women during labour and birth.

ACMI implemented the Professional Development Credit Point Program in 1997. Points are awarded against educational activity specific to evidence based midwifery practice. ACMI expects midwives to continually update their knowledge in order to maintain their professional skills. ACMI recommends that midwives maintain their own record of annual professional development education and that, on average a midwife should achieve 40 points per year.

General Practitioners

At present there is no mandatory requirement for General Practitioners either as a member of the Royal College of General Practitioners (RCGP) or as prescribed by the *Medical Practice Act 1994* to:

- undertake continuing professional development
- demonstrate continuing professional development
- care for a minimum number of women during labour and birth.

However, RCGP encourages GP's practicing in women's reproductive health to acquire a minimum of 30 points per triennium. Points are allocated per hour of education. Doctors practicing as GPs through the OTD training program have no obligation to undertake any specific ongoing professional development relating to obstetric care.

Credentialing of Maternity Care Providers

Credentials are the formal qualifications, training, experience and clinical competence of the medical practitioner and clinical privileges result from the permission granted to a practitioner to provide medical and other patient care services within defined limits in a health care facility. They represent the range and scope of clinical responsibility that a practitioner may exercise in the facility.

The establishment of practitioner competence and suitability to practice at particular facilities is addressed in the credentialing and granting of clinical privileges to practitioners. A number of Australian states have Guidelines on practitioner credentialing and clinical privileges.⁹ The Australian Council for Safety and Quality in Health care is currently developing a National Standard for the Credentialing and Clinical Privileging of medical staff.

Principles to guide accreditation and granting of clinical privileges to practitioners of obstetrics in Victoria need to be incorporated within the framework to be developed. This will ensure some consistency across rural health providers of acceptable levels of practice and models of care. This is considered essential in the recruitment of clinicians, particularly for overseas trained doctors, who at the present time comprise a significant proportion of rural practitioners.

3. Defined clinical guidelines

Each health service will be responsible for the development of clinical guidelines for its birthing service. These guidelines will be adapted to each hospital facility, taking in to account:

- numbers of skilled staff numbers,
- the nature and standard of facilities and equipment,
- the level of care appropriate for each service,
- the complexity of service delivery,
- risk management, with consideration of acceptable risk at stages along the continuum from low-risk to high-risk,
- how the hospital operates within the total health service system for the area

The guidelines must include:

- known referral pathways and transfer protocols, including where there are delays in transfer.
- prearranged agreed integrated policies and protocols for the management of emergency situations in obstetrics and a well-coordinated transfer process.
- reference to the capacity of the health service to provide both emergency and elective caesarean sections specifying acceptable parameters for intervention. Policies and protocols must take into account both emergency and elective caesarean management for all health professionals.
- Policies and protocols to clearly delineate the responsibility for patient management if there is to be a lengthy delay between decision to transfer and delivery time.

It is essential that the locally determined guidelines be agreed between all clinical staff and hospital management. They must then be incorporated into documented protocols, procedures and expected work practices and clearly explained to all new or agency staff.

Rural Ambulance Victoria are also stakeholders in the decision making process and the local ambulance service should be involved in coordination between services and agencies. Active links with the ambulance paramedics would ensure that those women expected to deliver in the near future would be known to both the health service and the ambulance service. It is hoped that this would lead to improved service responsiveness and coordination.

Proposed 'low-risk' birthing service eligibility criteria have been developed through work commissioned by the Department of Human Services in early 2003. The purpose of this work was to develop Low-Risk Criteria for use by Rural Obstetric & Midwifery Services in Victoria¹⁰. The proposed guidelines are provided in Appendix 1.

4. Quality Standards

Work Practices

As has been described, the clinical guidelines and protocols put in place must be applicable to each particular hospital but should be based on well researched and frequently reviewed evidence based guidelines for intrapartum care.

Appropriate management, identified in policy and procedure documents, must be achievable by the organisation and factor in the average number and skill mix of the staff usually available. A system should be implemented to ensure that all staff have knowledge of and are familiar with all polices and procedures and that this system is regularly evaluated.

The birthing service should also be able to offer a pregnant woman some choice in the way in which her pregnancy and birth are managed clinically. This will include shared

care arrangements where possible. The *Rural Maternity Initiative*⁶ should assist this development.

Evaluation Processes

Appropriate management, identified in policy and procedure documents must be achievable by the organisation and factor in the average number and skill mix of staff that is usually available. The service level determined will be appropriate to the situation at the time, and perhaps up to 5 years time, but as circumstances change these will need regular review.

A system should be implemented to ensure that all staff have knowledge of, and are familiar with all policies and procedures, and that this system is regularly evaluated.

Clinical Risk Assessment

As women assessed as having a pregnancy classified as low-risk have the potential to become high-risk during the course of the pregnancy, labour and birth, it is imperative that a continuous process of risk assessment becomes part of the routine practice.

The management of a rural birthing service must recognise and understand service provision boundaries in terms of staff availability, skill mix and knowledge, equipment, geography, emergency transport and response times. Recognition of the boundaries will mean recognition of difficult clinical situations and thus make it easier for health professionals to identify in a timely manner those women requiring transfer to an appropriate regional or tertiary centre.

Clinical Governance

Executive Management, together with the Board and employed health professionals need to be able to demonstrate to the community that their rural birthing service can:

- Manage birthing to a level of risk determined in response to local conditions
- Recognise and appropriately act upon unexpected emergency situations
- Provide timely intervention at all times if required
- Review and monitor performance data and outcomes of care
- Review benchmarking performance data and participate in review of procedures, protocols, training, upskilling and care provided to address any issues arising.
- Report to the community about review, monitoring and quality improvement activities undertaken.

Effective clinical governance processes will also enable rural birthing services to identify the importance of collaboration between health professionals in the care of the birthing woman who becomes high-risk during the labour.

5. Support Services

Infrastructure requirements

As a minimum services must have available a dedicated, fully equipped birthing suite. An equipped operating theatre and recovery area must be available if caesarean sections are to be performed. Neonatal resuscitation equipment should be available, with staff trained and competent in its use. Designated Post-natal beds may be required, depending on the service volume and models available.

Essential minimum equipment also includes a fetal monitoring or cardiotocograph machine (CTG). Regional centres must have 24-hour access to ultrasound equipment within the birthing unit.

Overall infrastructure requirements should be in accordance with available Design Guidelines and Generic Briefs.

Pathology Service

As a potential for post partum haemorrhage follows any delivery, rural birthing services must have, as a minimum, the ability to administer blood products. This may include cross matched blood managed by an off-site laboratory and available locally within one hour. The services, whether on or off site, must be provided by a pathology facility with laboratory staff and facilities with National Association of Testing Authorities (NATA) accreditation.

A minimum level of pathology service also includes the capacity for blood and specimen collection mechanisms and the provision of cross-matched blood, on call 24 hours. Regional services must also have on site blood storage and a laboratory that meets the standards of the National Pathology Accreditation Advisory Committee (NPAAC).

Pharmacy Service

Small rural birthing services do not need to have an on-site pharmacy service, but there must be at least a supply of emergency drugs through an imprest system and the capacity to consult with a clinical pharmacist. The hospital must comply with relevant statutory regulations regarding the provision of medications and must provide appropriate levels of information about the drugs prescribed. Administration of medications by medical and nursing staff must comply with APAC guidelines, with input from a visiting or consulting pharmacist.

Regional services must also provide an on-site pharmacy or contracted service with clinical pharmacy service provision on weekdays. Access to a pharmacist for emergency advice should be available 24 hours.

Where to from here

It is important that the criteria developed are relevant to the rural hospitals undertaking birthing services. The criteria must also remain current and incorporate changing clinical practice where this is applicable. A regular review and update process will therefore need to be determined as part of the implementation.

Before the criteria can be finalised, consultation will be undertaken to debate and discuss the development of low-risk and high-risk criteria for use by rural and regional hospitals. Included in the consultation will be representatives from all hospitals, clinical areas, divisions of GPs, professional organisations, colleges and regional offices. The focus of this work is birthing services in rural and regional services, so consultation will not include tertiary services in metropolitan areas.

The Maternity Services Advisory Committee will be an important reference to be included in the consultation.

When developed, the criteria based framework will be incorporated within the regular service planning process for health services. This will ensure decisions about future services can be made with a clear reference to widely acceptable standards and support sustainability of rural health services to meet community needs.

This process is expected to highlight a number of particular rural areas where further review and coordinated service planning will still be required. These will be services in areas where either the numbers of births are falling or where advanced obstetrical care is either unavailable or tenuous. This includes the more isolated areas such as the Wimmera/Mallee, the Alpine area north-east from Alexandra and the East Gippsland area. The metropolitan/rural fringe is another area where services will need specific consideration, as demand is growing with limited service availability. This will be the subject of further work between DHS and health services.

Comments and feedback on this Discussion Paper is welcome and encouraged.

Comments would be appreciated by 12 December 2003.

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Appendix 1: Possible Clinical Guidelines / Criteria for a Low Risk Birthing Service

Low-Risk - Inclusion Criteria	Rationale
Age between 18 – 40 years	
At term: 37 – 41.3 weeks	After 41.3 weeks the management of the woman should be discussed with a regional hospital, it may be deemed appropriate for the pregnancy to continue without alteration to the birth environment at this time
Cephalic presentation	
Singleton pregnancy	
Longitudinal lie	
No previous uterine surgery including C/Section	
Spontaneous onset of labour	Where a woman requires induction of labour for post maturity and where no risk factors are apparent it may be deemed appropriate for these women to birth in low risk facilities (See below)
Regular antenatal attendance	
Multiparous with history of uneventful pregnancy	Para 4 or less with history of uneventful pregnancy
Primigravida	Assessed as low risk (first time mother may or may not be deemed appropriate for rural birthing services – see below)
Further Consideration	Rationale
Primigravid women with uneventful pregnancy	Is it safe for a Primigravid woman to birth in the low risk environment offered?. Some rural birthing services have difficulty in providing caesarean sections or epidural anaesthesia. Further discussion and consideration needs to be given to Primigravid women.
Induction of labour post term where the pregnancy has been uneventful	Where a woman requires induction of labour for post maturity and where no other risk factors are apparent it may be deemed appropriate for these women to birth in 'low-risk' facilities. The decision then lies with the facility to judge their ability to provide safe care in this instance according to staff availability, skill and experience. Evidence suggests that the perinatal mortality rate increases post term. The agents used for ripening (prostaglandin gel) and induction of labour (Syntocinon) come with their own risks
Grand Multiparous (Para 5 or more)	There needs to be further discussion and consideration for this group of women

Exclusion Criteria:	Rationale
Group 1: Maternal Risk Factors	May require concurrent care during pregnancy or where intervention at the time of birth can reasonably be considered necessary
Chronic illness – renal disease, cardiac disease	Requires care of a physician and obstetrician during pregnancy as close monitoring of the pregnancy required with possible induction of labour prior to term
Severe Asthma	May require care of a physician and close monitoring of pregnancy, may require medication change
Insulin Dependent Diabetic	Requires rigorous pre pregnancy blood sugar control. Require detailed 18 week scan, Care within tertiary facility, Induction of labour approximately 38 weeks, sliding insulin scale required in labour, sugar levels of mother require rigorous monitoring in pregnancy and labour. Baby at increased risk of hypoglycaemia, macrosomia, intra uterine growth restriction. Will require neonatal and paediatric care
Epilepsy	Requires detailed 18-week scan. Additional assistance during pregnancy, monitor medication during the pregnancy
Hypertension (essential): a pre existing diagnosis of hypertension pre conception or before 20 weeks of pregnancy without apparent underlying cause Systolic \geq 140 mmHg Diastolic \geq 90 mmHg	Increased risk of pre-eclampsia and risk of other underlying conditions causing concern. Intra uterine growth restriction, often increased maternal age, Close monitoring required late in pregnancy, may require induction of labour
Uterine abnormality: where the lie of the fetus may be compromised	May have had previous caesarean section, may present with abnormal lie, Increased risk of ruptured uterus
Recent or recurrent drug abuse	Mother greater risk of wanting to withdraw during pregnancy therefore it is important that the mother is stabilised, increased risk of premature labour. Baby will withdraw post birth therefore requires close observation in nursery with paediatric support
Injury to bony pelvis	Increased risk of need for analgesia (epidural) in labour, Increased risk of obstructed labour
Current psychiatric disturbances	Increased need for psychiatric review early in pregnancy as may need to change or cease current medication. If stable may be argument for local care and birth if individually appropriate
Auto immune disease	Requires increased monitoring throughout pregnancy, increased risk of miscarriage and stillbirth (unexplained)
Gross obesity / anorexia : increase in weight or decrease in weight beyond that considered desirable with regard to age, height and bone structure	

Exclusion Criteria:	Rationale
Group 2: Obstetric History	May require specialist obstetric monitoring, and intervention at the time of birth
Extreme Prematurity < 34 weeks	Increased incidence of re-occurrence, required availability of neonatal and paediatric services
Previous Caesarean section (even when the woman has laboured successfully post caesarean section)	If vaginal birth after caesarean continuous monitoring in labour is recommended management. Need to have blood available and ability to perform emergency caesarean section. Obstetrician care should be available
Antepartum Haemorrhage, (need to make a judgment on the significance)	Increased risk of re-occurrence requires close monitoring.
History of poor obstetric outcome (Unexplained stillbirth, fetal death in utero, shoulder dystocia involving delay or necessitating added manoeuvres)	Increased chance of re-occurrence, may require induction of labour (social not medical) at or before gestation of previous stillbirth, Increased need for close monitoring (often social but can be medical), requires Obstetric care, increased risk of Intra uterine growth restriction
Rhesus Iso-immunisation	Requires care in tertiary facility, Increased risk of premature birth, may require intra uterine transfusion
Cervical Incompetence/Cone biopsy	If stitch in situ will require removal of suture at approximately 36 – 37 weeks (Level 2 facility). If no labour follows may then be suitable to birth in Level 1 if the mother wishes
More than 3 spontaneous or induced abortions	Often cared for at larger or tertiary facility until 12–18 weeks. Then able to be cared for at lower level facility according to the mother’s wishes providing there are no other medical or obstetric complications
Previous difficult birth (difficult forceps, shoulder dystocia)	Should have obstetric care, may require elective caesarean or induction of labour at or pre term
Past History of Post Partum Haemorrhage (Need to make a judgment on the significance)	Need to have blood available and ability to manage blood loss post birth.
Previous Pre-eclampsia BP >= 170 / 110 during previous pregnancy associated with: Intra Uterine Growth Restriction (IUGR) Abnormal renal function tests Abnormal liver function tests Required parenteral antihypertensives during management of pre-eclampsia Required magnesium sulphate during management of pre-eclampsia	Increased risk of developing Pre eclampsia in next pregnancy (20% chance of re-occurrence overall), Increased frequency of visits, Close monitoring of pregnancy, Increased risk of need for induction of labour preterm if it recurs
History of Intra Uterine Growth Restriction (IUGR)	Increase chance of re-occurrence. May require detailed scan to eliminate reoccurrence- then able to be cared for at lower level facility according to the mother’s wishes, providing there are no other medical or obstetric complications.

Exclusion Criteria:	Rationale
Group 3: Current Pregnancy	May require specialist obstetric monitoring, and intervention at the time of birth
Prematurity (prior to 36-37 weeks)	Monitor in labour, special care nursery care required. Should the mother not be delivered at 37 weeks it may be deemed appropriate for the management of the pregnancy to be continued in the lower level facility
Pre-term Premature Rupture of Membranes (membranes rupture prior to 37 weeks)	Care should be managed from a regional or tertiary centre until it is deemed appropriate for the care to be managed from a lower level facility
Multiple pregnancy	Increased caesarean rate, increased risk of prematurity, pre-eclampsia, diabetes, mal presentation. Often older mothers or IVF
Breech presentation	Assessment of all breech presentations at 34 weeks by regional or tertiary facility to ascertain if an External Cephalic Version (ECV) is able to be performed or to plan for the time and place of birth. Increased risk of caesarean section
Placenta praevia	Caesarean section required, must have blood available, requires obstetric care, and may have significant antepartum haemorrhage requiring urgent delivery. Risk to both mother and baby
Grand Multiparous	Increased risk of postpartum haemorrhage, incoordinate labour, unstable lie
Active genital herpes	Requires caesarean section
Known Fetal abnormality	Depending on the paediatric and neonatal care required at birth, if lethal syndrome then parents may choose a birth closer to home if there is no risk to the mother.
Late presentation for antenatal care	No or minimal antenatal history
Rhesus iso-immunisation that develops during pregnancy	Requires care in tertiary facility, Increased risk of premature birth, may require intra uterine transfusion
Abnormal GTT	Requires Level 2 hospital care, Fetal monitoring required in late pregnancy, neonatal and paediatric care may be required for the baby
Oligohydramnios	Placental insufficiency the cause, monitoring in pregnancy is required, may require induction of labour
Polyhydramnios	Fetal abnormalities or placenta praevia can be the cause, increased risk of cord prolapse, premature labour and abruptio placenta
Malpresentation/ Unstable lie persisting after 37 weeks	Obstetric management required, induction of labour with controlled artificial rupture of membranes, increased risk of cord prolapse
Severe anaemia	Need to investigate the reason and correct or treat if possible, increased risk of postpartum haemorrhage, must have access to blood and cross matching facilities.

Antepartum Haemorrhage (Need to quantify)	A woman experiencing any episodes of bleeding after the 20 th week of pregnancy should be referred to a regional or tertiary centre for investigation of the origin. If ongoing or significant need monitoring in labour or Caesarean Section, but it may be deemed appropriate for the individual women to be cared for in the rural birthing service
Pre-eclampsia - de novo hypertension after 20 weeks and new onset of one or more of the following: Proteinuria Renal insufficiency Liver disease Neurological problems Haematological changes Pulmonary oedema Intra uterine growth restriction (IUGR)	Obstetric care, may require ongoing investigation and induction of labour or caesarean section, risk of placental insufficiency and intra uterine growth restriction
Suspected / confirmed Fetal Death in Utero	May require induction of labour, risk of disseminating intravascular coagulation, Facility should offer choice of post mortem
Suspected / confirmed IUGR	Requires monitoring late in pregnancy and labour, increased possibility of induction of labour, baby will require neonatal and paediatric support
Post maturity beyond 42 weeks	Outside the realms of low-risk, if the pregnancy is to continue at the mothers request, further fetal well being studies should be conducted
Significantly Large for dates (Primigravid)	May require induction of labour, suspect assistance required during the birth process, may require epidural, no birthing history
Post maturity beyond 41 weeks (with no recent evidence of satisfactory fetal well being)	Will require monitoring and possible induction of labour, may be indicative of suspected fetal compromise
Prolonged rupture of membranes	Increased risk of infection, requires continuous monitoring in labour
Pre- term pre- labour rupture of membranes	Increased risk of infection, prematurity. Requires antenatal and intrapartum fetal monitoring
Evidence of suspected fetal compromise at any gestation	Will require Doppler studies, fetal monitoring, possible induction of labour and availability of nursery care
Maternal Age Less than 18 years	Evidence suggests that there is an increase in genital tract infection in these women, often may go untreated particularly if the woman presents late in pregnancy. Evidence suggests that such infection can be related to premature birth
Maternal Age Greater than 40 years	Increasing maternal age is proportionate to increase in maternal morbidity and mortality. May require close monitoring of pregnancy if age associated with other medical problems.

Further Consideration	Rationale
Parity > 4	Further discussion and consideration needs to be given to this group of women
Pregnancy requiring induction of labour	Further discussion and consideration needs to be given to women who have an induction of labour for post maturity, these women may not be deemed to be inappropriate in some rural birthing services depending on the availability and experience of health professionals. Discussion with a referral hospital should include mode of induction.

Exclusion Criteria:	Rationale
Group 4: Intrapartum	May require intrapartum and postpartum specialist care*
Prolonged rupture of membranes at term >24 hours	Increased risk of infection. Rural Birthing Services would need to consider augmentation of labour in the event of PROM
Intrapartum Haemorrhage	Requires delivery, with no fetal compromise suspected, transfer to appropriate facility
Meconium / Blood stained liquor on rupture of membranes	Requires monitoring possible expedited delivery. Ongoing management should be discussed with a regional or tertiary facility. May require transfer if the birth is not imminent
Maternal Pyrexia (38°)	Need to identify cause if possible, if obstructed labour and no suspected fetal compromise transfer to appropriate facility. Commence treatment of infective processes if apparent and transfer.
Slow progress in labour	Need to discuss ongoing management with regional or tertiary facility as may require transfer for analgesia or further management. Strict policies and protocols need to be developed re consultation and transfer of this group of women in order that consultation occurs early and transfer if required is timely.
Post Partum Haemorrhage	Strict policies and protocols need to be developed and adhered to re post partum haemorrhage. The early identification of women at risk of haemorrhage in order that transfer is timely. Women often do not exhibit clinical compromise until they have lost 30% of circulating volume. Important to stabilise and transfer to higher level facility as soon as possible
Non-reassuring fetal status / Fetal distress	Strict policies and protocols need to be developed re consultation with regional or tertiary facility in any suspected cases of fetal compromise.
Failed instrumental birth	Consultation with a regional or tertiary health service must be sought.

* If considering intrapartum transfer, the risks of transfer must be weighed against the risks that optimal care may not be able to be provided at the Rural Birthing Service. Therefore, it is important that transfer is considered early.

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 - ⁴ Service Capability Framework. A draft report for consultation and road testing. Clinical Strategy Team, Queensland Health, March 2003.
 - ⁵ A Guide to Community Consultation in Rural and Regional Communities. Rural and Regional Health Services Branch, RRHACS, DHS, March 2003
 - ⁶ The Rural Maternity Initiative is being developed by the Maternity Services Program, Metropolitan Health and Aged Care Services Division. For further details see <http://www.health.vic.gov.au/maternitycare/>
 - ⁷ Continuing Professional Development for Rural General Practitioners Subsidy Program. Workforce Policy Unit, DHS Email: cpdgp@dhs.vic.gov.au
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 - ⁹ *Credentials and Clinical Privileges, Guidelines for Rural and Community General Practitioners*, Tasmania Department of Health and Human Services, Jan 2000
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