

And the women said...

REPORTING ON BIRTHING SERVICES FOR ABORIGINAL WOMEN FROM REMOTE TOP END COMMUNITIES.

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STRUCTURE OF THE REPORT

The first section of this report includes the introduction, background, literature review, methodology, a summary of findings, the recommendations and a conclusion. The second section gives a detailed report on the consultation. It has been divided into the three districts: Darwin, East Arnhem and Katherine. In each of these districts discussions were held with people in the regional centre who are involved in the care of antenatal women, birthing and postnatal care. This report details: the regional services that are available; the consultations that occurred; the general themes that emerged; and, any additional comments that were made.

Following each regional summary are the reports from the communities that were visited in the district. The community reports include: an overview of the community; how the consultation was conducted; general themes that were identified from the consultations; additional comments from the women and the health staff; and, the feasibility of birthing in these communities. Much of the information presented about the individual communities was collected from individuals in the communities themselves. A publication titled 'Quality Discharge Planning, Doing it Better for the Bush' was also used for some additional information.¹

The material used for referencing is presented in footnote form. Direct quotations are identified by single inverted commas and are in italics. In order to maintain confidentiality people have not been identified. The appendix contains a glossary and two tables. The first table presents the equipment that was available in each of the communities visited. The second table is a summary table showing the number of births from each of the communities including the percentage of children born in the community.

¹ THS, 1997, *'Quality Discharge Planning - Doing it Better for the Bush'* Government Printers, Darwin.

EXECUTIVE SUMMARY

INTRODUCTION

The aim of the Remote Area Birthing Project is to develop an approach to birthing in the Top End which will improve birth outcomes and experiences for Aboriginal people and improve the quality of hospital and remote community based services. Improvements will be gained through integrating practices proposed by non urban Aboriginal women and service providers into the existing service delivery structure.

This report documents the strategies community based Aboriginal women suggest will improve birth outcomes and their experiences as THS clients. Prior to this project Aboriginal women in the Top End have had no input into the development of birthing policy, practices or protocols. The complex interaction of Aboriginal and non Aboriginal beliefs and practices in relation to birthing are integrated into recommendations which it is anticipated will improve the cultural effectiveness of care without compromising the safety of mother, baby or service provider.

Aboriginal women have repeatedly expressed a desire to choose to give birth on their communities with the support and cooperation of health staff, and there are many communities where birthing is currently taking place. In the last decade up to 27% of some communities' births occurred in the community². This situation creates a need for guidelines for staff providing birthing support on these communities.

CONSULTATION

Consultation has taken place with remote area Aboriginal women and service providers involved in birthing across the Top End. Community infrastructure and resources relating to birthing were documented in the communities visited.

Topics explored during the consultations included:

² 1998 - Millingimbi: 27.7 % of births occurred on the community, see Table 11.

- the feasibility and safety of community birthing;
- how to improve antenatal care and education; and,
- how to improve care in both the remote setting and the regional centres.

CURRENT PRACTICE

At present all pregnant women living in remote areas are encouraged to birth their babies in hospital. Women are transferred to the regional centre at 38 weeks or earlier. The Patient Assistance Travel Scheme (PATS) will pay for travel and accommodation to the nearest centre and an escort for women 15yrs and under, or in special circumstances. Most women stay in hostels in the regional centres although a few will stay with family or friends. If a woman wishes to stay in her community for the birth, the protocol suggests she be reviewed by the doctor for risk factors and the birth should be attended by a skilled and experienced midwife. However not all communities have skilled, experienced midwives as a part of their staff.

KEY FINDINGS

The key findings across the districts were remarkably similar. They have been presented under 11 separate headings although some of the issues overlap. The key findings are explored in more detail in the body of the report.

The key findings relate to:

Safety - on the community and in the regional centre;

Choice - the lack of choice for women and the unattractiveness of available options;

Escorts - support in labour often leads to shorter labour with less intervention, less caesarean sections and less complications following the birth;

Hostels - Two major problems were identified with hostels:

- the lack of security in many of the hostels for both the women and their personal property; and,
- the lack of food in some hostels

Human Resources - all communities need a skilled, experienced midwife;

Infrastructure and Equipment - there is no standardisation of basic equipment;

Antenatal Women - culturally appropriate educational material and models of care are lacking in both the regional and remote area settings;

Continuing Education - needed for both Aboriginal Health Workers and nurses, and rotation of staff from remote areas for updating clinical midwifery skills;

Regional Hospitals - the main issues relate to inappropriate and ineffective communication between staff and patients, including the absence of interpreters;

Birth Centre in Darwin - unanimous support for a birth centre in Darwin; and,

Community Birthing - the majority of people consulted felt that community birthing should be available for low risk multiparous women, providing a number of conditions were met.

Most service providers felt that a pilot project was the only way to determine if community birthing would compromise the safety of the mother or the infant. Many felt that outcomes may be improved.

CONCLUSION

A range of recommendations for improving services in the remote communities and the regional centres have been made in this report. Many recommendations could be implemented with minimal cost. Some recommendations need an initial outlay of funds but the expense would be offset against the reduced cost of intervention during labour and birth and the long term costs related to low birth weight. Expenditure related to some recommendations are likely to lead to less hospital admissions in early life and lessen the chance of developing chronic diseases in adulthood. Some of the recommendations would have direct savings for the health budgets and many would have long term indirect savings.

The primary advantages of improving maternal health services in regional centres would be:

- to provide a safer environment for women who are awaiting birth;
- to provide savings in the costs associated with birthing as women would be:
 - ◆ less likely to return to their community prior to birth, often then being evacuated out of the community in labour or following birth by the Air Medical Service;
 - ◆ less likely to require intervention in labour; and,

- ◆ less likely to have a low birth weight infant.

The primary advantages of providing a remote area birthing service would be:

- to provide a safer environment for those women who are already choosing to birth in their remote communities;
- to improve antenatal care, antenatal education and postnatal care, which would lead to improved health for both mothers and babies; and,
- to develop a service delivery model:
 - ◆ that has been requested by Aboriginal communities;
 - ◆ that has a primary health care focus;
 - ◆ in collaboration with community members;
 - ◆ that strengthens community capacity to be involved in decisions that effect their health.

SECTION ONE

INTRODUCTION

The Remote Area Birthing Project is funded through Territory Health Services (THS) Women's Health Strategy Unit, with support from the Public Health Outcomes and Funding Agreement. The aim of the Project is to develop an approach to birthing in the Top End which will improve birth outcomes and experiences for Aboriginal people and improve the quality of hospital and remote community based services by integrating practices proposed by non urban Aboriginal women and service providers. This report documents the strategies community based Aboriginal women suggest will improve birth outcomes and their experiences as THS clients. Prior to this project Aboriginal women in the Top End have had no input into the development of birthing policy, practices or protocols, and it is anticipated that THS practices will be revised to more closely align service delivery with the expressed wishes of the client group.

The impetus for the project came from a repeatedly expressed desire by Aboriginal women to be able to choose to give birth on their communities with the support and cooperation of health staff, and by the need to provide guidelines for staff providing services on communities where birthing is already taking place. In the last decade up to 27% of some communities' births occurred in the community³.

The women consulted during this project report that having a greater choice about where they birth, access to birthing services which are responsive to their needs and increased safety when accessing town and community services would contribute to improved health during pregnancy and more positive birthing and post partum outcomes.

³ 1998 - Millingimbi: 27.7 % of births occurred on the community, see Table 11.

BACKGROUND

PROJECT HISTORY

The Review of Birthing Services in the Northern Territory of Australia⁴ was conducted in 1992 and recommended that:

- R 3.4, Consultations take place with Aboriginal women in the Top End in relation to providing culturally appropriate birth centre care and the issues related to birthing in remote communities;
- R 4.4, A forum to be established to enable Aboriginal women and health professionals to examine the issues related to birthing in rural and remote communities;
- R 4.5, THS develop and formalise a clear policy in relation to birthing outside hospitals including in rural and remote communities;
- R 4.6, THS recognise and provide support to remote and rural area women who choose to birth in their community; and,
- R 17.1, Alternative models of care that provide a choice for women from rural and remote areas, as discussed elsewhere in the report, are implemented as soon as possible.

These recommendations were endorsed by the THS Executive in July 1995.⁵

An interim Birthing Policy was prepared by the Women's Health Adviser incorporating the recommendations endorsed by THS. The policy is currently in draft form and does not yet make any policy statement on birthing outside of hospitals, on homelands or communities. The policy is expected to be completed by end 1999 and will include a policy statement on birthing outside hospitals. The policy will be informed by recommendations from this Remote Area Consultation

⁴ Northern Territory Department of Health and Community Services, 1993, *Review of Birthing Services in the Northern Territory of Australia, 1992*, AGPS, NT pp.10-18.

⁵ Women's Health Unit, THS, 1996, *The 1992 Review of Birthing Services in the Northern Territory of Australia, Implementation Status Report, October 1996*, AGPS, NT

Report and the Women's Business Meeting Draft Report and Recommendations.⁶ The Women's Business Meeting was hosted by Danila Dilba, Darwin's Aboriginal Medical Service, in response to Recommendation 4.4 in the Review of Birthing Services.

In 1995 officers from the Commonwealth Government held brief consultations concerning birthing services with Aboriginal women of the Northern Territory.⁷ Specific concerns raised were:

- the availability of appropriate and accessible birthing services;
- the limited choices available to women, particularly those in remote settings;
- the disruption to the lives of Aboriginal women and their families because of the requirement to travel to major centres to give birth;
- the inappropriateness of some birthing suites in hospitals which are particularly traumatic for some Aboriginal women;
- the inflexibility of the current guidelines for the PATS system to accommodate the needs of many Aboriginal women; and,
- the need for more Aboriginal women to be trained as health workers in midwifery and obstetrics.

These points, together with how women feel about community birthing and any cultural issues related to birthing, have been explored in this consultation.

The project has been divided in to four phases. Phase 1 of the Remote Area Birthing Project was to develop a standards of care document to support women wanting to birth their babies in their remote communities including:

- resource requirements;

⁶ Biluru Bitji Binnilitlum Medical Service, 1998, *Danila Dilba Women's Business Meeting, Darwin Nov 2-3 1998, Draft Report and Recommendations*, Danila Dilba, Darwin.

⁷ Dr Carmen Lawrence, Commonwealth Minister for Human Services and Health, *Ministerial Correspondence*, to Mr Finch, Northern Territory Minister for Health, 27.11.95, File No.HC952448.

- minimum standards; and,
- a risk assessment criteria for pregnant women.

The standards are in draft form at present and will be completed in the next phase of the project.

This report is a result of Phase 2 of the project, the Consultation Phase.

Phase 3 of the project will involve an economic evaluation of provision of a comprehensive birthing service in remote communities including a cost benefit and risk benefit analysis.

Phase 4 will progress to a pilot program, subject to the recommendations from Phase 2 and Phase 3 and THS executive approval.

CURRENT PRACTICE

In the absence of any THS policy to the contrary current practice in the Top End is to follow the recommendations from the Women's Health Protocols.⁸ The Protocols state that all pregnant women are to be encouraged to deliver their babies in the hospital. Women are transferred to town at 38 weeks gestation, or earlier if their expected date of birth is uncertain, or if there are any complications necessitating hospitalisation. If a woman is reluctant to have her baby in hospital, the Protocols recommend she be reviewed by the doctor for any complicating factors and fully informed about the possible risks of birthing in the remote setting. The protocols suggest that if women choose not to travel to the regional centre for the birth, then they should be attended by a skilled and experienced midwife. Unfortunately not all community health centres have skilled and experienced midwives available, in fact some do not have midwives at all.

The Patients Assistance Travel Scheme (PATS) will pay for flights and accommodation (up to \$30 per night for health care card holders and pensioners and \$25 per night otherwise) to the nearest regional centre. PATS will pay for an official escort if the pregnant woman is 15 years and under, or if there are exceptional circumstances.⁹ In some communities staff are reportedly able to utilise

⁸ Margot McLean, 1994, *Northern Territory Top End Women's Health Protocols*, NT DH&CS, Darwin.

⁹ Acute & Specialist Care Services, 1998, *Patients Assistance Travel Scheme - Procedures 1998* THS, Darwin.

PATS for all primiparous women to have escorts, however this varies depending on the arguments presented by the staff and is at the discretion of the doctor responsible for authorising PATS.

Most women stay in hostels in the regional centres although a few will stay with family or friends. The Aboriginal Hostels Association is a Commonwealth organisation that owns the majority of hostels in each of the regional centres. Some of these cater largely to people from remote areas who are in the regional centre for medical purposes. The PATS budget covers the accommodation and three meals a day in these hostels. Ebirra Hostel in Darwin is popular with pregnant women, particularly those from Maningrida and Groote Island, but also for women from Wadeye, Daly River, Peppimenarti, Oenpelli, Goulburn Island, Crocker Island and Galiwin'ku. It is owned by the Groote Island Trust and managed by Anglicare. Ebirra does not provide food, although they do have cooking facilities.

If women have a medical complication they may need to come to their regional centre and stay as an inpatient in the hospital. In Darwin there is a self care facility that is available for any person who requires minimal observation or care. The unit is on the hospital grounds, well fenced, has a security guard, is locked at night and women say they feel very secure there. Meals are provided by the hospital. Katherine Hostel operates in a similar way to the self care facility. It is on the hospital grounds, is secure, has a manager 24 hours a day and meals are provided. Nhulunbuy do not have this type of facility (further descriptions are in the regional overviews).

At present remote community health services are not resourced with either staff or equipment to provide comprehensive birthing services. Although some women, are birthing prematurely or are choosing to birth in their communities or on their homelands, this is not planned for in the provision of health services to communities, or in the training and recruitment of staff.

LITERATURE REVIEW

BIRTHING STATISTICS FOR THE NORTHERN TERRITORY

The aim of the N.T. Aboriginal Health Policy is ‘To reduce health differences between Aboriginal and non-Aboriginal Territorians by significant and sustainable improvements to the health of the Aboriginal population’.¹⁰ The information and statistics provided in this chapter show that although improvements have occurred, a significant change is still necessary.

In 1997 there were 88,316 females in the NT (47% of the population), 30% of these (26,447) identified as Aboriginal or Torres Strait Islander people.¹¹ Two thirds of Aboriginal women reside in rural and remote areas of the Territory.¹² The following table (Table 1) has been adapted from two reports^{13, 14} and shows comparative statistics for Aboriginal and non-Aboriginal women in the Northern Territory in 1995.

It can be seen that a significantly larger proportion of Aboriginal women are not accessing antenatal care and have some form of complication during pregnancy. Aboriginal women have more than double the incidence of perinatal and infant mortality and a much lower life expectancy than non-Aboriginal women in the NT. There have, however, been improvements in the Aboriginal health statistics in the NT over the last ten years. These are illustrated in the following graph (Table 2).

¹⁰ Public Health Strategy Unit, THS, 1998, *The Aboriginal Public Health Strategy and Implementation Guide, 1997-2002*, N. T. Government Printers, Darwin.

¹¹ Australian Bureau of Statistics (ABS), 1997, *Population by Age and Sex: Australian States and Territories: 30 June 1992 to 30 June 1997*, ABS 3201.0

¹² Women’s Health Strategy Unit, THS, 1999, *The Health Status of Women in the Northern Territory*, AGPS, Darwin.

¹³ Women’s Health Strategy Unit, THS, 1999, *The Health Status of Women in the Northern Territory*, AGPS, Darwin.

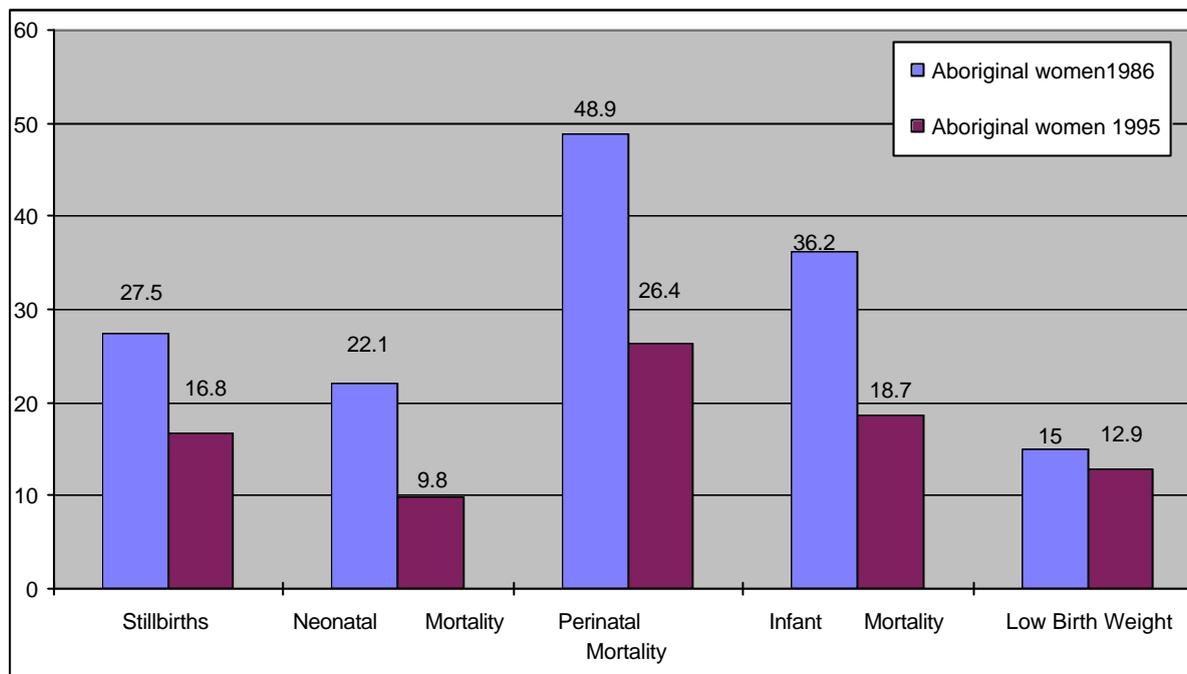
¹⁴ d’Espaignet, E.T., Woods, M., Measey, M.L., 1997, *NT Midwives Collection: Mothers and Babies, 1995*, AGPS, Darwin.

Table 1. Comparative statistics for Aboriginal and non-Aboriginal women in the Northern Territory in 1995, additional statistics for maternal mortality from 1979-1991.

	Aboriginal Women	Non-Aboriginal Women
Female Population in NT	26,447 (30%)	61,869 (70%)
Life expectancy in years	61.7	83
No. of women who gave birth	1,244 (34.5%)	2,363 (65.5%)
Fertility rate	2.6	2
% of pregnant women < 20 years	29.3%	6%
% with no antenatal care	2.8%	0.3%
% with anaemia	18.7%	3%
Medical complications in pregnancy	45.7%	16.8%
Obstetric complications in pregnancy	24.9%	19.7%
Delivery complications	44.8%	39.5%
Puerperal complications prior to discharge	16.4%	4.2%
Maternal mortality, 1995	0	0
Maternal mortality, 1979-1991	88 / 100,000	3 / 100,000
Low birth weight (<2500gms)	12.9%	5.6%
Stillbirths (per 1,000)	16.8	6.7
Neonatal mortality (per 1,000)	9.8	5
Perinatal mortality (per 1,000)	26.4	11.6
Infant mortality (per 1,000)	18.7	7.1

The graph below demonstrates the improvement in some areas from the years 1986 to 1995. All categories are shown as the rate per 1,000 live births except the low birth weight category which is shown as a percent of all births.¹⁵

Table 2. Statistics comparing data for Aboriginal women in the NT in 1986 and 1995.



Two very concerning and preventable factors identified in Table 1 are:

- almost one fifth of pregnant Aboriginal women are anaemic (18.7% vs. 3% in non-Aboriginal women); and,
- a high number of low birth weight babies are being born to Aboriginal women (12.9% vs 5.6%), more than double that of non-Aboriginal women.

Research indicates that maternal undernutrition and anaemia are linked to low birthweight which often leads to poor infant health and the development of chronic diseases in adulthood (such as diabetes and cardiovascular disease).^{16, 17, 18} This theory is known as the Barker Hypothesis.

¹⁵ Markey, P.G., d'Espaignet, E.T., Condon, J.R., Woods, M., 1998, *Trends in the Health of Mothers and Babies, NT 1986-95*, AGPS, Darwin.

¹⁶ Godfrey, K., 1998, 'Maternal Regulation of Fetal Development and Health in Adult Life', in *European Journal of Obstetrics and Gynaecology and Reproductive Biology*, 78:141-150.

Recent studies suggest that maternal stress hormones may cross the placenta and delay some parts of fetal brain growth, and maternal stress may cause the fetus to release its own stress hormones, also affecting fetal brain growth.¹⁹ One study using data from the Darwin Hospital attributed 28% of low birth weight and 15% of intrauterine growth retardation to maternal malnutrition.²⁰ Given this increasing body of evidence it would seem logical to intervene at the earliest possible opportunity to try to improve the health and well being of pregnant women, in an attempt to improve the birth weight and health of the neonate.

The table below depicts the number of births that occurred in the three regional hospitals in the Top End in 1995 as well as the total number that occurred in the NT.

Table 3. Number of births in hospitals in the Top End region, by Indigenous status, in 1995.

	Aboriginal	Non- Aboriginal	Total
Royal Darwin Hospital	441 (31%)	985 (69%)	1426
Gove District Hospital	119 (68%)	57 (32%)	176
Katherine Hospital	184 (48%)	197 (52%)	381
Total for NT	1244 (34.5%)	2363 (65.5%)	3607

The number of women who gave birth out of hospitals has been decreasing over the last ten years. In 1987, 11% of Aboriginal births occurred out of hospitals, and in 1995 the percent had decreased to 4.5%.²¹ In the Top End region in 1995 the number is higher than that for the overall NT with

¹⁷ Weeramanthri, T., 1998, *Finding the Right Balance - A "Preventable Chronic diseases Strategy for the NT" Draft Paper*, THS, Darwin.

¹⁸ Hoy, W., McFarlane, R., Pugsley, D., Norman, R., Mathews, J., 1996, 'Markers for Cardiovascular and Renal Morbidity: Expectations for an Intervention Programme in an Australian Aboriginal Community', in *Clinical and Experimental Pharmacology and Physiology*, 23:1:S33-S37.

¹⁹ Women and Infants Research Foundation Western Australia, *Annual report 1998*, Western Australia, pp.15-16.

²⁰ Sayers, S., Powers, J., 1997, 'Risk factors for low birth weight, intrauterine growth retardation and preterm birth in the Darwin Health Region', *Australian and New Zealand Journal of Public Health*, 21:5:524-530.

²¹ Markey, P.G., d'Espaignet, E.T., Condon, J.R., Woods, M., 1998, *Trends in the Health of Mothers and Babies, NT 1986-95*, AGPS, Darwin.

Darwin Rural having 16 (6%) births out of hospital, East Arnhem having 11 (7.2%) and Katherine Region, 7 (3.3%).²²

Statistics from the PATS clerks and Air Medical Service were also accessed. Table 4 demonstrates the number of women who were transported into Darwin by the Darwin Air Medical service for a 12 month period from November 1997. It was estimated that approximately 10% of women who have been transported into Darwin for birth return home prior to the birth. Reasons for this include problems at home with other children or husbands, a death in the community or women may decide to go home because they are lonely or have run out of money. Many of these women will return to Darwin with the Air Medical Transport (either in labour or following the birth). This represents an increased cost to THS that could be reduced if regional services were improved, making it easier for women to stay until the birth.

A total of 13 women were carried to Darwin by Air Medical Transport (in the same 12 month period) following the birth of their babies in the community. It is unclear if there were medical reasons for this or if it was purely routine practice that occurs across the Top End. This too could be avoided if communities had the resources to offer the necessary postnatal care.

²² d'Espaignet, E.T., Woods, M., Measey, M.L., 1997, *NT Midwives Collection: Mothers and Babies, 1995*, AGPS, Darwin.

Table 4. Number of maternity transfers to Darwin (by Darwin remote Air medical Service), in the 12 month period from November 1997 to October 1998, including escort and labour status. Includes women from the Tiwi Islands for the first 4 months only, numbers do not include those women from outlying areas who drove in to Darwin.

	Primiparous women	Multiparous women	Total
Total number of pregnant women	33 (20%)	131 (80%)	164
No. and % who had official escorts	21 (64%)	10 (8%)	31 (19%)
Transferred in labour or early labour	7	16	23
Transferred in premature labour	2	10	12
Transferred following birth			13
Estimated average no. of women awaiting birth in Darwin hostels at any one time*	1	3	4
Estimated maximum no. of women awaiting birth in Darwin hostels at any one time*	3	6	9

*These numbers were an estimate by the PATS clerks and do not include inpatients.

This table indicates that 177 women (164 pregnant women plus 13 women who had already given birth) travelled by plane from the Darwin Rural district during this 12 month period, (in 1995, 241 women from the Darwin Rural region gave birth).²³ Without doing fairly intensive investigations it is difficult to say why these numbers differ so much. Less women from this area may have given birth, or women may have travelled to Darwin by car or there could be an error in the statistics. Those women who were transferred in labour (13%), in premature labour (7%) or following birth (7%) would have come in to Darwin with the Air Medical Transport (total n = 48 = 27%).

Additionally, women are transported into Darwin with the Katherine and East Arnhem Air Medical Services. Women from these districts are often transferred due to complications of pregnancy and are admitted as inpatients to the hospital. Anecdotal evidence suggests that there could be between 0-10 women from remote areas as inpatients at any one time. 1995 statistics showed that 241

Aboriginal women from Darwin rural, 27 Aboriginal women from East Arnhem, 22 Aboriginal women from Katherine region and 14 Aboriginal women from elsewhere (usually the Kimberley region) delivered in RDH (total 441).

From the above information a number of conclusions can be drawn:

- on available statistics 21/33 primiparous women who came to Darwin in that 12 month time period had an official escort (providing all primiparous women with an escort would only mean approval for another 12 escorts);
- there may be 9-20 pregnant Aboriginal women from remote areas in Darwin at any one time (enough to support a full time midwife who could offer antenatal care and education, support in labour and postnatal care);
- a significant number of pregnant women are being transferred to Darwin by Air Medical transport. Improving antenatal care and education and remote area birthing may reduce this number;
- a number of healthy women are being transported to their regional centre with the Air Medical Service following birthing in the community. If community health centres are able to provide adequate care for these women, negating the need for transfer, significant cost savings could occur.

Only 19% of women who travelled to Darwin to give birth in this period had an escort with them, although some may have had family in Darwin or other patients in the hospital may have accompanied them in labour. Support in labour, and one to one care in labour have both been shown to make a positive difference to interventions and outcomes in labour. One meta-analysis²⁴ examining four trials with 1,349 primiparous women showed statistically significant results (95% confidence level). Women who had continuous support in labour:

²³ d'Espaignet, E.T., Woods, M., Measey, M.L., 1997, *NT Midwives Collection: Mothers and Babies, 1995*, AGPS, Darwin.

²⁴ Zhang, J., Bernasko, J.W., Leybovich, E., Fahs, M., Hatch, M., 1996, 'Continuous labour support from labour attendant for primiparous women: a meta-analysis,' *Obstetrics and Gynaecology* 88(4 Part 2) pp.739-744.

- had a shorter labour by an average of 2.8 hours (CI: 2.2-3.4, $P < 0.01$),
- used oxytocin half as frequently (RR: 0.44, CI: 0.3-0.6),
- were twice as likely to have a normal vaginal birth (RR: 2.01, CI: 1.5-2.7),
- were half as likely to have a forceps delivery (RR: 0.46, CI: 0.3-0.7),
- were half as likely to have a caesarean delivery (RR: 0.54, CI: 0.4-0.7), and,
- had less complications following birth and showed increased bonding and breastfeeding in the post partum period.

Although none of the studies had performed a cost-benefit analysis, the above study suggested that there was an enormous potential for savings in government expenditure, even when the cost of providing labouring support is borne by the health department.

The Cochrane Data Base has a review of randomised controlled trials comparing routine care with continuous one to one support in labour given by either a lay person or a professional.²⁵ This review included 13 trials from eight countries, involving more than 4,900 women, and was not restricted to primiparous women. The intervention of one to one support showed:

- a reduction in medication used for pain relief,
- a reduction in operative vaginal deliveries,
- a reduction in caesarean deliveries,
- a reduction in a five minute Apgar score less than seven, and,
- many of the trials found increased satisfaction with labour, improved breastfeeding and less postnatal depression at the six week postnatal check.

One finding of interest in this review was that although the women's own support people were important there were still beneficial effects from a trained caregiver. Further research is needed to identify how much training is necessary for the caregiver. These studies did not provide a cost-benefit analysis but one study that has provided an economic evaluation of one to one care in labour

²⁵ Hodnett, E.D., 1998, 'Support from caregivers during childbirth (Cochrane Review)' In: *The Cochrane Library, Issue 3*, Oxford: Update Software.

by a team of midwives was the Australian study by Rowley.²⁶ Rowley et al did a randomised trial comparing continuity of care by a team of midwives with routine care, (814 participants). Her outcomes were similar to those stated above but additionally she found a significant difference in costs between the two groups (total costs for team care, \$1,087,965 vs. routine care \$1,145,837). A notable point about this study was that it included both low and high risk women.

It has been well researched that midwifery care is cheaper than care by an obstetrician and birthing at home or in a birth centre is cheaper than birthing in a hospital.²⁷ Evidence provided above suggests that outcomes could be improved as well. This is not to suggest that obstetricians are not needed, or that all women should birth at home, only that they represent an increased cost when providing routine care for low risk women.

Options for Effective Care in Childbirth is an Australian document compiled by an expert panel established by the National Health and Medical Research Council.²⁸

Pertinent recommendations include:

- R3.1 Improving Aboriginal and Torres Strait Islander health generally should be recognised as a crucial step in improving the outcomes of childbirth for Aboriginal and Torres Strait Islander women;
- R3.2 Providers of maternity services should be cognisant of the needs and expectations of Aboriginal and Torres Strait Islander women;
- R3.3 To achieve this Aboriginal and Torres Strait Islander women leaders in each region should be involved in planning maternity services. In some regions it may be appropriate to provide birthing centres;
- R3.4 Aboriginal and Torres Strait Islander women representatives should be appointed to liaison committees representing the consumers of major obstetric hospitals;

²⁶ Rowley M., Hensley, M., Brinsmead, M., Wlodarczyk, J., 1995, 'Continuity of care by a midwife team versus routine care during pregnancy and birth: a randomised trial,' *The Medical Journal of Australia*, 163:289-293.

²⁷ Wagner, M., 1994, 'The Australian Birth Machine,' Paper presented at the *Future Birth 94 Conference*, Australia, May 1994.

²⁸ NHMRC, 1996, *Options For Effective Care In Childbirth*, AGPS, Canberra.

- R3.5 Priority needs to be given to increasing the number of Aboriginal and Torres Strait Islander birth attendants, midwives and obstetricians. However, an initial step may have to be undertaken first to encourage more Aboriginal and Torres Strait Islanders to train as nurses and medical practitioners;
- R3.6 The role and function of birth attendants needs to be agreed between local Aboriginal and Torres Strait Islander groups and health care providers;
- R6.3 Birthing Centres should be a considered option for all women. The centres should contain separate midwifery units which have supporting medical staff but with direct links to a traditional obstetric and midwifery unit.

Consultations with Aboriginal women in the Top End have occurred and both this report and the report from the Danila Dilba Women's Business meeting²⁹ will be available for service providers (R3.2) to assist in an awareness of Aboriginal needs and expectations. Currently there are no Aboriginal birthing attendants, midwives or obstetricians employed in the maternity units of the Top End hospitals, and only one Aboriginal health worker (AHW) employed to work in maternity at Royal Darwin Hospital (R3.5, R3.6). It was widely reported that the AHW was often perceived to be in a liaison role rather than a clinical one. There is no birth centre available in the Top End (R6.3) and no forum for Aboriginal women to be involved in the planning of maternity services (R3.3, R3.4).³⁰

The relationship between lower socioeconomic status and poor health is well established. Recent research suggests this is not only due to the known risk factors such as smoking, poor diet, little exercise and alcohol consumption. An additional variable shown to make a difference relates to the level of control a person has over their life and the things that affect their life.³¹ This was highlighted by Andrew Podger (Secretary, Department of Health and Family Services [DH&FS]) in his speech at the Annual Public Health Conference in 1998. He has suggested: that DH&FS needs to 'increase people's involvement in decision making and action'; and, that 'information derived from relevant

²⁹ Biluru Bitji Binnilitlum Medical Service, 1998, *Danila Dilba Women's Business Meeting, Darwin Nov 2-3 1998, Draft Report and Recommendations*, Danila Dilba, Darwin.

³⁰ NHMRC, 1996, *Options For Effective Care In Childbirth*, AGPS, Canberra.

³¹ Marmot, M., Bosma, H., Hemingway, H., Brunner, E., Stansfeld, S., 1997, 'Contribution of job control and other risk factors to social variations in coronary heart disease factors,' in *Lancet*, 350:235-39.

research and evaluation is essential to provide the information and evidence base necessary to develop appropriate public policy, including public health policy'.³² Thus asking women what they want regarding birthing issues is not enough, changes must be made at a policy level.

PROJECTS OF A COMPARATIVE NATURE

Similar consultations occurred in the central region of Australia in the 1980's.³³ These resulted in Congress Alukura, a model for Aboriginal women's health incorporating Aboriginal law, language and culture with a particular emphasis on pregnancy and childbirth. In 1987 a two year pilot program was commenced and successful applications for grant funding has enabled Alukura to move to their own premises and expand their services. Alukura provides a broad range of services including antenatal care and education in a variety of settings, birthing for low risk women, postnatal care, gynaecological services, women's health promotion activities, sexual assault and domestic violence services.³⁴ Evaluation statistics have shown an increase in early antenatal visits (before 13 weeks gestation), antenatal care, postnatal care and neonatal checks, particularly for urban based Aboriginal women in Alice Springs. Unfortunately Alukura has had ongoing problems with funding and have never been funded to a sufficient level to provide a comprehensive birthing service.

Queensland have also held consultations with Aboriginal women in five different communities to look at the maternal health services in these communities and examine Aboriginal birthing on homelands.³⁵ A clinical needs assessment in these five communities and a framework for service enhancement has been conducted and documented.³⁶ Recommendations for the individual Aboriginal communities, the regional hospitals and the whole health service have been made. One of the communities (Palm

³² Podger, A., 1998, 'Public Health Information: Poverty and Health,' Conference report, *30th Annual Public Health Association Conference, Plenary Session B: The Politics of Information*.

³³ Carter, B., Hussen, E., Abbott, L., Liddle, M., Wighton, M., McCormack, M., Duncan, P., Nathan P., 1987, 'Borning: Pmere Laltyeke Anwerne Ampe Mpwaretyeke, Congress Alukura by the Grandmothers Law,' *Australian Aboriginal Studies* 1:2-33.

³⁴ Congress Alukura, 1996, *Alternative Birthing Services Program Evaluation, January 1 1994-January 1 1996*, Congress Alukura, Alice Springs.

³⁵ Myles, H., *Some Good Long Talks*, 1992, The Aboriginal and Torres Strait Islander Health Policy Unit & The Women's Health Policy Unit, Queensland.

³⁶ King J., Tanna, S., Murphy, F., Colditz, P., Martin, M., Wall M., 1998, *Maternal Health Services In Aboriginal Communities, A clinical needs assessment of five communities and a framework for service enhancement*, Policy Coordination Unit, Queensland.

Island) is already providing a birthing service for low risk women and it is recommended that a birthing service be established at two other communities (Yarabah and Cherbourg). These recommendations were made in 1998 and progress since then has not yet been evaluated.

Comparisons have been made between the Indigenous populations of Australia and Canada.³⁷ Both groups suffer higher morbidity and mortality than the general population, many live in very isolated areas, both have a holistic view of health (encompassing the spiritual) and both groups have strong ties to the land. Chamberlain (1997) describes a study comparing results from a birthing centre for the Inuit people that was established in one community in an isolated area of the Canadian Arctic, with a similar community that continued routine care.³⁸ Over 100 women were involved in the study during the 12 month period which examined the safety of the births, the psychosocial needs of the families and the costs involved. Some results are detailed below:

- there were seven emergencies in the community based birth centre and all were managed effectively,
- the study community was found to meet the psychosocial and cultural needs of the women who experienced:
 - ◆ greater choices in childbirth;
 - ◆ less emotional and economic stress;
 - ◆ improved support in labour;
 - ◆ more community involvement in childbirth issues; and,
- a simplified cost analysis showed a cost recovery of 70-97%, with the potential of much greater savings if the birthing unit had an ultrasound machine on site.

The study concluded that birthing in an isolated community can be a safe, culturally sensitive and satisfying event, if care is provided by experienced midwives.

³⁷ Chamberlain, M., 1997, *Power in action: Empowerment of Indigenous Communities. A midwifery run birthing centre in the Canadian Arctic*, Paper presented at the National midwives Conference, April 16-18, 1997.

³⁸ Ibid.

SUMMARY

Given the high morbidity and mortality of Aboriginal women and neonates in the NT, the research that has been presented here can be interpreted in a number of different ways. It may be concluded that Aboriginal women have poor health indicators and need close medical supervision throughout pregnancy, and should definitely be birthing their babies in a hospital setting. Alternatively one may conclude that poor services in the regional centres, institutionalised care, an unsupportive environment that promotes fear, and a lack of control over decisions affecting their health, are actually contributing to poor health and obstetric outcomes.

This report explores some of the aspects that may be contributing to the documented birth outcomes for remote Aboriginal women in the Top End. It also explores the feasibility of remote area birthing and makes recommendations for improving care and services for pregnant women in regional centres.

METHODOLOGY

HEALTH SERVICES IN THE TOP END OF THE NORTHERN TERRITORY



The Top End region of the Northern Territory has a population of 143,000, 31% (45,000) of whom live in rural and remote areas, with 10,000 of these in Katherine and 4,000 in Nhulunbuy.³⁹ The consultation was conducted in the Darwin Rural district, the East Arnhem district and the Katherine district. Initially the six communities with the highest birth rate (based on the 1993-5 statistics from THS Epidemiology Branch) were chosen for the consultation, along with the regional service providers involved in birthing. The six communities were Maningrida, Nguiu, Wadeye, Galiwin'ku, Ngukurr and Borroloola.

As the project progressed more communities were included as it was felt that their input into how regional services could be improved was important. Meetings were held with the staff in the regional hospitals, district medical officers and flight nurses. Hostels where the pregnant women stay when in their regional centre were also visited. A total of 442 people across the Top End were involved in the consultations over a four and a half month period.

The methodology for this consultation used a qualitative framework encompassing semistructured interviews with key informants, small focus groups and, in some situations, community meetings. The interviewer travelled out to the communities where local facilitators were employed as consultants to help ensure representatives from the different language groups were involved in the discussions. The local facilitators were nominated by the communities themselves, usually following discussions between the health workers, the nurses, and the Strong Women Workers.

The majority of people interviewed were women, although in some communities the interviewer was approached by men who felt they would like to add something to the discussion. Others who assisted with the consultations, venues and transport were the health workers, the Strong Women Workers, local health centre staff, women's groups and women's centres. Three or four days were spent in most of the communities and advice was taken from the facilitators as to the best approach for the consultation in the individual communities. Some chose to travel to the different camps and outstations where impromptu meetings were held in the shade while other facilitators chose to hold central meetings and organised transport to bring women into these areas.

In depth discussions were held with the facilitators to ensure they were aware of the history of the project and the aims and objectives of the consultation. A topic guide was utilised to ensure that all areas were covered but this was in a very loose form as leading questions were avoided and participants were given free reign to take the discussions in which ever direction they chose. The major topics covered included past practices surrounding birthing, present practices and future directions.

³⁹ THS, 1998, *Territory Health Services Annual Report 1997/98*, N. T. Government Printers.

Attitudes towards community birthing were explored and suggestions for improving the care of antenatal women and their experiences when they came into their regional centre were also discussed. Some of the facilitators chose to lead the discussions in the various groups whereas others preferred to interpret in language as the interviewer lead the discussions.

All groups were asked for permission to take notes and to use the material in this report. This was granted by every group. A copy of the notes from each community was returned to the facilitators for comment and to ensure the information was correct prior to using it in this report.

Interviews were also held with the health centre staff and a similar question framework and format were followed. Their attitudes regarding the feasibility of community birthing, how to improve antenatal care and problems associated with maternal services and regional centres were explored.

Other information collected included:

- an inventory of infrastructure and human resources;
- a list of equipment related to birthing;
- birthing services available to the community;
- the birth rate for each of the communities;
- the number of births that are occurring in each of the communities; and,
- general information on intervention and complication rates.

Much of this information was incomplete at the community level as there appeared to be no standardised data collection approach across the Top End communities. The Perinatal Statistics Form (details information on pregnancy, births, and complications) is compiled by the Epidemiology Branch but they do not document the information for individual communities. The Australian Bureau of Statistics, the Midwives Data Collection and the Births, Deaths and Marriages Registrar all use different coding for the communities and were also unable to provide this information. As a consequence only limited statistics have been reproduced in this report.

KEY FINDINGS ACROSS THE TOP END

1. SAFETY ISSUES

Birthing in the Community

Safety concerns regarding birthing in remote communities is an important issue to all who were consulted. During the consultation everyone expressed the belief that there should be no compromise in the safety of babies and mothers. Those interviewed felt that all primiparous women and high risk women should continue to deliver in the regional centres. However, an overwhelming majority of remote Aboriginal women, particularly in the larger communities, felt that it would be safe for healthy multiparous women to deliver in their communities. Some of the service providers also felt that community birthing could be performed safely if it was implemented properly and resourced adequately. A small minority, comprising mainly obstetricians, felt that birthing in remote areas should never be contemplated.

Across the Top End people felt that Health Centres need more support, equipment, staff, and resources *‘as some women will always choose to deliver out there... it would be better to sanction it and do it safely... it might improve antenatal and early labour care’*. Several staff from various communities said that they would be worried about being blamed if something went wrong, *‘a sick baby was born in Port Keats and the nurse was blamed’*.

A significant number of stakeholders suggested that there will always be people who have extreme views on the matter and the only way to be certain would be to do a pilot project. All agreed the pilot would need to be very well planned prior to implementation, resourced adequately, and trialed only with healthy women.

Personal Safety in the Regional Centre

Personal safety in the regional centres is an issue for many women. It was felt to be one of the major reasons women did not like leaving their communities, sometimes for several weeks at a time, at such a vulnerable stage of their lives. Women say that they get *‘humbug from drunks and relatives’* who take their money, often leaving them with nothing. Many women feel they have to give their money away when a family member asks for it, even if it leaves them with nothing. They

often have to share rooms at the hostel with strangers. Most hostels do not have anywhere to lock up personal belongings or food and women reported that these often go missing. Many women do not have bank accounts or anywhere safe to keep their money. The older women in particular worry about the younger women, although many people suggested the men were also concerned about the women when they were in town. In fact some would not allow their partners to go in for this very reason. Comparisons were made with non-Aboriginal women who can be robbed and hassled, when travelling in unfamiliar countries.

2. CHOICE

A major concern across the regions was the lack of choice for women. The majority of Aboriginal women and many of the service providers felt that healthy multiparous women should be able to choose to deliver in their own community. There were suggestions that traditional rivalry may be the reason that women from some of the East Arnhem communities (particularly Groote Eylandt and Numbulwar), would prefer to travel to Darwin rather than Nhulunbuy for birthing their babies. They felt that if they did want to wait in Darwin they should not have to pay half of their airfare themselves, particularly as many said they did not feel safe staying at the Nhulunbuy hostel.⁴⁰

Women suggested that it was unlikely they would travel to nearby communities offering community birthing unless they had strong family links there. They said if they could not birth in their own community then they would prefer to go to the regional centre.

3. ESCORTS

The issue of escorts was raised by all women, and many of the service providers, in every consultation. Women who were identified as requiring an official escort were:

- primiparous women;
- women who did not fully comprehend the English language;
- women who were coming to the regional centre for the first time (including women who may have come in when they were young and have very little recollection of the event);

⁴⁰ The PATS policy will pay for people to go to the closest service in the NT. If women from East Arnhem choose to go to Darwin then they are given a one way ticket and have to arrange their own way home.

- women with special needs;
- women from the East Arnhem or Katherine Region who are advised to come to Darwin due to complications in pregnancy;
- women who would prefer to bring their young children with them, particularly those under four years. If this occurred they would need an escort to look after the children when they are in hospital; and,
- many of the health staff felt that all pregnant women would benefit from having an escort.

Aboriginal women believed the advantages of having an escort were:

- to provide company and emotional support in town;
- to help the young women buy clothes and accessories for a new baby;
- to teach the young women about the city (eg. catching buses and taxis);
- to encourage the pregnant women to stay in town when they are feeling lonely and want to return to their families;
- to protect them from humbug (particularly when drunks or relatives want their money);
- to help the pregnant women manage their money, and ensure it is sent in from the community;
- to explain (in language) what occurs to them in the hospital, including procedures, drugs, the progress of labour, and complications;
- to decrease the women's fear of the hospital and birthing experience;
- to help with breastfeeding and mothercrafting skills; and,
- to help look after any other children that the pregnant women bring in with them.

Many of the staff in regional centres thought the escorts' primary role was:

- as a support person in labour;
- to explain birthing and medical procedures to the labouring woman in her own language; and,
- to provide company for the women in their final weeks of pregnancy.

Staff members said they did not understand why some of the escorts did not accompany the pregnant women in labour. Some said they felt angry when the escort disappeared, often just when they felt they needed them most. A common explanation for this from the women, was that some of the younger girls did not want their escort to accompany them in labour as they felt too shy. Many women said they would like support in labour and thought an older Aboriginal woman should be employed in the birthing units to fulfil this role. A commonly held belief by the health staff was that a support person in labour would decrease the intervention, and the caesarean section, rate. Ideally women would have an escort to accompany them in the regional centre and an older Aboriginal woman (with or without the escort) for one to one support in labour. As previously discussed, continuous support in labour has been shown; to decrease obstetric intervention and improve outcomes for both the mother and neonate, in many clinical trials.

4. HOSTELS

When women come into the regional centres they are accommodated in hostels (described in more detail in the review of current practice and the overview of each region). The major problem identified with hostels was the lack of security. Although some of the hostels do have gates, a night watchman (usually for five nights of the week), and lock out drunk people, the women still find that they are being hassled at all hours of the day and night (sometimes by people who jump over the fences). In Darwin one hostel is next to a park where people gather to drink alcohol and several of the hostels do not have adequate fencing. Security is an issue that was raised consistently by women who stay at Nhulunbuy, where the hostel is unfenced and very near a public bar.

Another problem that was continually identified by both women and service providers, was that the Ebirra hostel in Darwin, which is very popular with pregnant women, does not provide food (most hostels provide three meals a day). When antenatal women are having problems with money (there are often delays when it is being sent in from the community or their money may have been taken from them), they may go without eating for several days. Sometimes they wait for two to four weeks before going into labour, and they may eat very poorly for the duration. This is a dangerous situation for antenatal women considering: the last few weeks of pregnancy is when the fetus lays down stores of brown fat (a special heat producing tissue that infants use to maintain their temperature after

birth⁴¹); that undernutrition in late pregnancy can cause prompt slowing of fetal growth as the nutrients are diverted to the placenta, this can cause wasting of the fetus⁴²; the number of low birth weight babies (12.9% in 1995⁴³) that are born to Aboriginal women in the NT; and, as previously described, the link between low birth weight and the development of chronic diseases in adulthood.

Women from the Darwin Rural District said they would prefer to stay at the self care facility at the hospital and women from the East Arnhem districts said they would also prefer to stay at the hospital. The main reason given for this was they feel more secure there. In Darwin, the hospital is a social gathering place and when women are staying at self care they can walk to the hospital, whereas they need to catch a bus or taxi from the hostels. In general women felt it would be better if all antenatal women could stay somewhere together, and they would prefer this place to be on hospital grounds. Women in the Katherine district said they liked the hostel and felt secure there. Reasons identified for this were: because it is located on the hospital grounds; is away from local drinking places; and is secure and well fenced.

5. HUMAN RESOURCES

The human resource implications for providing community birthing services, was identified by most of the service providers, to be one of the greatest obstacles to establishing a community birthing program. Specific concerns identified by the health staff are:

- the nurses in some areas have had no previous remote area experience, and if they have been recruited through an agency they may not have been orientated to THS;
- the lack of midwifery experience in some of the centres (not only do some of the centres have midwives with very little post graduate experience, but some communities do not have a midwife at all!);
- the high turnover of staff;
- the insufficient staffing numbers in many of the health centres;

⁴¹ Klaus, H., Fanaroff, A., 1986, *Care of the High Risk Neonate*, 3rd ed, W.B. Saunders Company, Philadelphia.

⁴² Barker, D., Gluckman, P., Godfrey, K., Harding, J., Owens, J., Robinson, J., 1993, 'Fetal nutrition and cardiovascular disease in adult life,' *The Lancet*, 341:941:44.

⁴³ d'Espaignet, E.T., Woods, M., Measey, M.L., 1997, *NT Midwives Collection: Mothers and Babies, 1995*, AGPS, Darwin.

- the lack of experienced relievers, for holiday relief, or for staff to access training and education out of the community;
- the irregular attendance of health workers in some communities was mentioned as a barrier to effective antenatal care;
- the acute workload in the remote health centres; and,
- the fact that staff have to prioritise their programs as they feel they do not have the resources to do all programs in accordance with the best practice guidelines that are recommended by THS.

Staff suggested that if community birthing was to occur they would need two dedicated staff members for the women's health program, a midwife and an Aboriginal health worker. They would need the time to: practice primary health care in the community; have ongoing consultations with community women; concentrate on antenatal care, antenatal education, cultural issues surrounding birthing, postnatal care and well women's screening; and not be responsible for seeing clients outside these parameters except after hours. This is not feasible in any community at present, due to current workloads.

Everyone consulted felt that ALL communities needed at least one skilled, experienced midwife as a part of their staff. Communities without midwives are unable to provide comprehensive antenatal care, a consequence of which is often complications in pregnancy and birth, requiring increased intervention, and leading to poor outcomes for the mother and baby. When responding to a question regarding the importance of midwives on communities one remote area nurse commented:

'in my years in the bush it has been my experience that one midwife at a delivery is essential and two is preferable, particularly for emergency situations. In the last eighteen months we have delivered three babies who were neonatal deaths, five in one month who were premature (27-32 weeks), one breech and one normal delivery...one had a post partum haemorrhage... and we can sometimes wait up to nine hours for a medical plane'.

This situation highlights the importance of having experienced staff on communities that have the necessary equipment to deal with high risk births.

Many of the remote area nurses said they would like to be able to study midwifery externally through the university but identified the cost of a full fee paying course and the travel involved in getting practical experience as being a barrier. Considering there is already a shortage of midwives (a situation that is predicted to worsen in Australia in the future) it would be a beneficial investment to THS to facilitate the training of these remote area nurses. Costs associated with the midwifery education could be paid as a way of helping to retain staff in the remote area setting.

Recruitment and retention of staff are issues that need to be further explored. Operations Central have been following a program called the 'CAN Model' which has a multifactorial way of improving recruitment and retention of staff. Since introduction of this model they have shown improvements in these areas which have already produced significant cost savings. The major factors in the model are:

- introduction of a best practice framework for the working environment;
- recruitment of staff directly into a training program, with links to higher education;
- a six week foundation skills course which is attended by all staff prior to working in the remote setting; and,
- a partnership program that has been developed between staff in the hospital and staff in the remote setting.

Service providers suggested employing a midwife coordinator in each regional hospital to support and educate women from remote areas. Roles would include:

- antenatal care and education;
- to ensure attendance at the high risk antenatal clinic;
- to recognise early labour, ensuring timely presentation at the birthing unit; and,
- to assist with birth registration forms and paperwork.

All the above would relieve pressure on THS and could lead to improved birthing outcomes.

6. INFRASTRUCTURE AND EQUIPMENT

There is no standardised infrastructure or equipment across the Top End. Service providers, in particular remote area staff, air medical staff and the District Medical Officers (DMO) identified the following issues as being important:

- it was generally felt that unless the community had all weather access for the Air Medical Service it would be too dangerous to plan community birthing (even with all weather strips there can still be delays for many hours when there are emergencies in other areas);
- generators are not standard equipment in the Top End health centres and this can mean they are without power, and in some health centres, communication, for hours or days at a time;
- many of the health centres do not have appropriate equipment or infrastructure for birthing (eg. air conditioning or a humidcrib - some health centres heat towels in the microwave to try and keep premature babies warm), see equipment list in the appendix,
- any item that needs servicing or breaks down can be out of the community for months at a time;
- some health centres do not have a room that is designated for, or appropriate for, birthing.

Some communities suggested that a separate birth centre would be more appropriate.

Phase 1 of the Remote Area Birthing Project looked at the minimum resource requirements for community birthing and these have been documented in draft form.

7. ANTENATES

Community women consistently raised several issues that concern them about pregnant women.

Antenatal Education

The relative youth of many of the pregnant women and the lack of education regarding motherhood skills was an issue of importance to many of the older women. They felt that the old ways of communication and education were breaking down and nothing had replaced them. Some of the older women said '*that times were changing and the young did not listen to their elders anymore*'. Communities differed, some were in favour of developing a model for antenatal education with both the health centre staff and the elders involvement, whereas others felt this was a sensitive topic and should be handled in the traditional way.

In some communities the Strong Women, Strong Babies, Strong Culture Program has identified antenatal education as a priority and these women work with individual pregnant women or in small groups. Some of the Strong Women Workers said they felt they needed more support as they were unsure of their role with antenatal women and tended to work in other areas, for example with 'skinny kids' or the older people.

On current staffing levels all communities would have difficulty developing and delivering a culturally appropriate program for antenatal education. The community consultation needed prior to, and during such a program, would mean that a health worker and midwife would be out of the health centre for extended periods of time, and most health centres are not staffed well enough for this to occur. Many are already doing health education in the primary schools which can mean up to four staff members (male and female nurse or doctor and health workers), will be out of the health centre for varying times once a week. A full time health educator on the communities has been suggested by many, to be a necessary position for primary health care programs.

Boredom and Money Issues in the Regional Centre

The boredom and loneliness experienced by women in the regional centres were major reasons for women wanting to stay in their communities. Women said they often felt very isolated and had nothing to do. Lack of money was one of the reasons given for this. Many women described:

difficulties getting their money sent into them; trouble cashing cheques (often because they have no identification); and, having relatives take their money as soon as they get it. They suggested organised educational sessions, facilities for painting and sewing, videos on labour and mothercrafting, tours of the hospital and social outings would be welcome events.

Smoking

Older Aboriginal women expressed concerns about the number of young women who smoke cigarettes, particularly the pregnant women. Smoking is a known risk factor for low birth weight babies.⁴⁴ In fact one study using data from RDH reported that those women who smoked more than half a packet of cigarettes a day, were three times more likely to have a low birth weight infant, and one and a half times more likely to have a baby with intrauterine growth retardation.⁴⁵ One report from the NT suggested that the proportion of female Aboriginal adult smokers between the ages of 15-44 would be around 54-66% and another report found 76% of women between the ages of 20-45 in one community smoked cigarettes.^{46 47}

8. CONTINUING EDUCATION AND TRAINING NEEDS

Health Workers

Clinical Training

The majority of health workers said that they had performed many births in the past but did not feel they were current in their knowledge or skills. If community birthing was to occur they felt they would need to update their skills. At present there is no structure in place for health workers to come into Darwin for regular rotations through the maternity section.

Post Graduate Training

There are limited options available for health workers who want post graduate training in midwifery. There is no course available in the Northern Territory. James Cook University in Queensland offers a four week maternal skills course of which two weeks are theory and two weeks are practical. The

⁴⁴ Measey, M.L., d'Espaignet, E.T., Cunningham, J., 1998, *Adult Morbidity and Mortality due to Tobacco Smoking in the NT, 1986-1995*, THS Darwin.

⁴⁵ Sayers, S., Powers, J., 1997, 'Risk factors for low birth weight, intrauterine growth retardation and preterm birth in the Darwin Health Region', *Australian and New Zealand Journal of Public Health*, 21:5:524-530.

⁴⁶ Watson, C., Fleming, J., & Alexander, K., *A survey of Drug use Patterns in NT Aboriginal communities: 1986-1987*, NTDH&CS, Drug and Alcohol Bureau, Darwin, in Measey, M.L., d'Espaignet, E.T., Cunningham, J., 1998, *Adult Morbidity and Mortality due to Tobacco Smoking in the NT, 1986-1995*, THS Darwin.

⁴⁷ Kildea, S., 1997, *A Retrospective Epidemiological Study Comparing Fertile and Infertile Women in a Remote Indigenous Community in Australia*, Thesis, Southern Cross University.

practical placements are usually in Townsville or Sydney hospitals and are not presently occurring at Royal Darwin Hospital. Several health workers have attended this course, but they said they would like more detail and more clinical experience, particularly in the birthing area.

Ultrasound Training

During the consultation only one health worker had formal training in ultrasound techniques (she had spent two weeks at a Sydney hospital as an addition to the James Cook course). She felt this had been very valuable and she was using her skills to estimate early gestational dating, placental position, basic morphology and to diagnose multiple pregnancies.

Midwives

Clinical Updates

Midwives have said that if community birthing was to occur they would need regular rotations through the regional centre for clinical updates in birthing suite and neonatal resuscitation. Many thought three yearly intervals would be sufficient. At present there is no program for rotating remote area staff through the regional hospitals for clinical updates. The Staff Development Department have said they could explore this option further if it was identified as a training need.

A requirement for accreditation as an independent practitioner with the Australian College of Midwives is a minimum of ten births per year. At present this criteria is not appropriate for remote area midwives. If community birthing was to be formalised further research would be required to assess the suitability of these guidelines.

Ultrasound Training

Midwives said they would like training in basic ultrasound techniques, several health centres have ultrasound machines without anyone who is able to use them. Midwives believed this would allow earlier and more accurate dating and could lead to a decrease in waiting time in the regional centre when women relocate for the birth. They also felt it could be beneficial for diagnosing multiple pregnancies, placental location and malposition. The Staff Development Department have said they could assess the possibility of offering this training in the Top End.

Doctors

Continuing Medical Training

The Remote Workforce Agency is a Commonwealth funded organisation whose aim is to increase access of rural and remote communities to appropriate General Practitioner (GP) services. They offer orientation support and supply funds that can be accessed by doctors for ongoing training assistance. To maintain vocational registration doctors are required to attend continuing medical education which is measured by a point system over a three year period. If they have their Diploma of Obstetrics and Gynaecology a specific number of those points must be in the area of women's health.

Ultrasound Training

Several of the doctors in remote areas suggested that they would also like training in the use of ultrasound machines, particularly if women were to start birthing in the community.

9. REGIONAL HOSPITALS

There were two major concerns regarding the care in regional hospitals. The first was the lack of Aboriginal staff and interpreters in the hospitals, and the second was the physical surroundings.

Aboriginal Staff

There are very few Aboriginal staff working in the hospitals, particularly in a clinical role. Women across the Top End felt that this would make an enormous difference by making the hospitals less frightening. Many spoke of being scared in hospital, not understanding the medical procedures that were performed on them, or the medication that was given to them. One woman told how she had wanted to know why she was not falling pregnant and did not know that she had a Tubal Ligation at Caesarean Section when she was 21 years old until the community nurse looked up her notes and told her this several years later.

Interpreter Service

At present there is no interpreter service operating in the Top End and staff express frustration when they are trying to explain medical procedures and are unsure if the clients have a full understanding of what they are agreeing to. An example of this was given by one midwife who said *'there was a labouring woman in a lot of pain and she was being asked to consent to an urgent, complicated procedure as the baby was showing signs of distress... we couldn't find her escort anywhere and we had no-one to ring'*. Other inpatients who are able to speak the pregnant woman's language are sometimes used as interpreters. This is less than ideal as they would not be

trained interpreters, may not understand the medical language and may be of an inappropriate skin group to fulfil this role. Staff suggested that educational material in different Aboriginal languages, or utilising graphics, would help them to explain procedures to the women.

Physical Surroundings

Women continually mentioned that the hospitals (particularly RDH) were too cold (temperature) and the environment was not friendly. They said the hospitals should be more homely, with posters and paintings on the walls and pleasant outdoor areas (like Katherine Hospital). Several communities suggested they would be happy to donate artwork to be placed on the walls of the birthing unit to make it more appropriate for Aboriginal clients. Several women mentioned a fear of lifts and one woman said it *'felt unnatural having your baby so far above the ground'*. Women said that traditionally they laboured with many other women around them for support and encouragement and this did not occur in the hospital setting.

Positions in Labour

Women were concerned that the traditional position for birthing (squatting) was no longer being used. They said there was *'too much shame lying on your back with your legs open'* and felt that an older Aboriginal woman in the room (who felt comfortable being there) would make the younger girls use the squatting position. Midwives said they were happy for women to deliver in any position but found that women tended to stay on the beds. Current research suggests that lying down in labour (which continues to happen in many maternity units), is not advantageous to the progress of labour and may actually compromise blood flow to the uterus and adversely affect the fetus.⁴⁸

Use of the squatting position in the second stage of labour has been shown to: shorten the second stage; reduce backache; show less abnormal fetal heart rate patterns; and unless used judiciously, it may increase perineal trauma.⁴⁹ Employing an older Aboriginal woman who is trained as a support person for labour, is familiar with the hospital environment and understands the cultural aspects pertaining to birthing could be advantageous for both the labouring woman, and the staff.

⁴⁸ Enkin, M., Keirse, M., & Neilson, J., 1995, *A guide to effective care in pregnancy and childbirth*, 2nd ed. Oxford University Press Inc., New York.

⁴⁹ Ibid.

Complimentary to this may be the employment of a midwife who has met the women antenatally and is able to offer support in labour.

10. A BIRTH CENTRE IN DARWIN

There was very strong support for a birth centre in Darwin from both the remote area women and the health staff who were consulted. In fact many of the staff felt that this could be a safer option than delivering in the community, although there was concern regarding the number of women that would be allowed to access a birthing centre if they had strict criteria for low risk women. Many of the Aboriginal women felt that a birthing centre would allow them to practice their traditional customs surrounding birthing. They felt it would be an excellent venue to teach the younger generation about birthing and stressed the importance of Aboriginal and non-Aboriginal women working side by side.

The general feeling from remote women was that a birth centre should be for all women with a separate room or section for Aboriginal women. The comment '*all women together*' was often mentioned. This, however, was not the general feeling from the Birthing Forum that was hosted by Danila Dilba. The preferred option from this group of women was that a birthing centre be set up as part of the Aboriginal Community Controlled Medical Service, Danila Dilba.⁵⁰ Unfortunately the lack of money and resources makes it unlikely that two birthing centres (one for Aboriginal women and one for non-Aboriginal women) would ever be feasible in Darwin.

⁵⁰ Biluru Bitji Binnilitlum Medical Service, 1998, *Danila Dilba Women's Business Meeting, Darwin Nov 2-3 1998, Draft Report and Recommendations*, Danila Dilba, Darwin.

11. COMMUNITY BIRTHING

There was various levels of interest in community birthing. The majority of Aboriginal women felt that they should be able to choose to birth on their land and they believed it would be safe for low risk women. This was more apparent in the larger communities which were better resourced. In the smaller communities many women said they would not feel safe and would prefer to go to their regional centre. Most people who were consulted said if community birthing was to occur they would be happy to birth in the health centre. They thought it would be safer to have the midwives present with all their equipment. Some suggested that a separate birthing centre for women only would be ideal, if it could be set up appropriately. Many women felt that a community birthing program could improve antenatal care.

The nurses and doctors in the communities felt that it would be essential to have an Aboriginal health worker who is willing to work with the midwife if community birthing was to occur. They also felt that it would only succeed if the community were involved from the start and had input into how the program should work, particularly from the older Aboriginal women and Traditional Birthing Attendants.

In some areas there was general talk about land ownership. In particular, the older Aboriginal women wanted their grand children to be born on their land. Some people fear that the Australian government will not recognise traditional ownership of land if they have not been born on it. Alternatively people said that it did not matter where you were actually born as you were tied to the land through your parents, and this was what was most important.

Generally, service providers were interested in pursuing community birthing only if it was to be resourced adequately. Concern was expressed regarding the willingness of THS to provide the necessary resources, in particular to non-THS health centres. Major concerns revolved around the inability of many of the health centres to cope with their acute load as well as the general program work that was expected. They felt that there were always more guidelines being introduced following best practice principles but no-one realised that it was impossible to follow these as they were not staffed accordingly. Most service providers felt that a pilot project was the only way to

determine if community birthing would compromise the safety of the mother or the infant. Some felt that outcomes may be improved.

A very small number of people felt that it was ridiculous to talk about community birthing as it would never be resourced adequately and if implemented was likely to have a direct negative effect on the morbidity and mortality of both the mother and the infant.

RECOMMENDATIONS

1. SAFETY

R 1.1 Primiparous women and high risk women to be encouraged and supported to deliver in their regional hospital.

R 1.2 Guidelines and protocols be established for:

R 1.2.1 low risk women who choose to stay and deliver in the community;
and,

R 1.2.2 high risk women who choose to stay against the advice given to them from the community health centre.

2. CHOICE

R 2.1 Women in the East Arnhem region to be able to choose to go to Darwin or Nhulunbuy for the birth of their baby under standard PATS arrangements.

3. ESCORTS

Official escorts be provided upon request, for women in the following categories:

R 3.1 Primiparous women who are travelling to their regional centre;

R 3.2 Any woman who does not fully comprehend the English language;

R 3.3 All women under the age of twenty;

R 3.4 Women who were coming to the regional centre for the first time (including women who may have come in when they were young and have very little recollection of the event);

R 3.5 Women with special needs;

R 3.6 Women from the East Arnhem or Katherine Region who are advised to come to Darwin due to complications in pregnancy; and,

R 3.7 Women who are concerned about leaving their young children and would otherwise stay and birth in their community, should be able to bring the children into the regional centre, with an escort who is able to care for them when their mother is in hospital.

4. HOSTELS

R 4.1 A joint working party be formed to examine what changes are necessary to ensure the safety and nutritional requirements of THS clients when they are staying in the regional hostels.

5. HUMAN RESOURCES

Community Health Centres

R 5.1 All communities be staffed with at least one midwife who has current midwifery experience.

R 5.2 THS provide study support for remote area nurses who are willing to study midwifery externally through Northern Territory University.

R 5.3 Staffing numbers in remote communities are reviewed given the workload being uncovered as population and chronic disease lists become available.

R 5.4 Recruitment and retention of staff be addressed in accordance with Operations Central 'CAN Model', including:

- best practice framework for the working environment;
- recruit staff directly into a training program, with links to higher education;
- all staff to participate in the six week foundation skills course prior to working in the remote setting;
- a partnership program be developed between staff in the hospital and staff in the remote setting.

Regional Centres

R 5.5 Each regional birthing unit to employ an Aboriginal woman to be trained as a support person for labouring women.

R 5.6 A midwife coordinator be employed in each regional hospital to support and educate women from remote areas.

6. INFRASTRUCTURE AND EQUIPMENT

R 6.1 Standardised birthing equipment to be provided in all health centres, as per Minimum Standards Document.

R 6.2 An equipment bank is established to send out replacement items while equipment is off the community for servicing or repairs (as occurs in Operations Central).

R 6.3 Educational resources including audiovisual equipment and culturally appropriate material be accessible in every community health centre.

R 6.4 The collection of statistics and birthing documentation to be standardised across the Top End.

7. *ANTENATES*

R 7.1 Consistent with National Health and Medical Research Council (NHMRC) guidelines the Women's Business antenatal book⁵¹ be translated and distributed to all health centres, antenatal wards and clinics, birthing units and training providers.

R 7.2 Protocols be developed to improve the links and communication between the Strong Women Workers and the health centre staff.

R 7.3 Culturally effective intervention strategies be developed to address the high rate of smoking in antenatal women.

R 7.4 A protocol be developed to inform the remote health centres when pregnant women have returned home prior to the birth.

8. *CONTINUING EDUCATION AND TRAINING*

R 8.1 A comprehensive post graduate midwifery course be available for Health Workers.

R 8.2 A training program be developed to facilitate health workers who wish to rotate through the maternity unit of their regional hospital, with an educator or mentor to support them.

R 8.3 A structure be implemented to facilitate continuing education needs of remote area midwives who wish to update their skills.

9. *REGIONAL HOSPITALS*

R 9.1 All staff working in the hospitals and the remote health centres participate in cultural training.

R 9.2 The midwives clinic at RDH be extended to encourage antenatal midwifery care and decrease the waiting times.

⁵¹ The women of Kunbarllanjnja and Chris Evans, 1997, *Gama Gun-Nika Janguny - Women's Business*, Green Ant Publishing, Darwin.

- R 9.3** A four bedded bay in Ward 2 of Gove hospital be set up as a self care unit .
- R 9.4** A protocol be developed between Miwatj and the Nhulunbuy hospital to ensure all women have access to a ‘smoking ceremony’⁵² prior to discharge.
- R 9.5** Each regional centre refurbish areas in the birthing units to ensure they are more culturally appropriate for Aboriginal women.
- R 9.6** Mats to be available in every birthing room for women to birth on the floor; and upright positions or squatting should be actively encouraged during labour.
- R 9.7** Consistent with NHMRC guidelines ‘All major maternity units should incorporate the philosophy and practise of birthing centre care in the delivery suite’ Recommendation 6.1, NHMRC.⁵³
- R 9.8** Consistent with NHMRC guidelines ‘Interpreter services need to be readily available to provide cover for obstetric care including emergencies’ Recommendation 4.2 NHMRC.⁵⁴

10. BIRTH CENTRE IN DARWIN

- R 10.1** A birth centre be established on or near the hospital grounds.

11. COMMUNITY BIRTHING

Community / Health Centre

- R 11.1.1** Communities already supporting birthing to recruit midwives who are current in their knowledge and experience and are happy to work as advanced practitioners (to be a specific recruitment requirement).
- R 11.1.2** Those communities already having births to have all the equipment necessary for safe deliveries (as per Minimum Standards).
- R 11.1.3** Staff who are using an ultrasound machine for basic dating and screening be supported to access training in these skills.
- R 11.1.4** Availability of a safe and culturally appropriate place for birthing.

Antenatal Women

- R 11.2.1** Women who deliver in their communities should not be routinely transferred to the regional centre unless there is a

⁵² A traditional Ceremony that is performed when a new baby is born.

⁵³ NHMRC, 1996, *Options For Effective Care In Childbirth*, AGPS, Canberra.

⁵⁴ Ibid.

medical reason or the community staff are unable to deliver the necessary postnatal care.

R 11.2.2 Women wishing to birth in their community would need to attend for regular antenatal care and education.

Aboriginal Health Workers

R 11.3.1 A community birthing program only be established where at least one AHW is interested in working in partnership with a midwife.

Midwives

R 11.4.1 Time allocated to provide comprehensive holistic care to the antenatal, intrapartum and postnatal woman.

R 11.4.2 Midwives to be competent in adult and neonatal resuscitation, intravenous canulation and perineal repair.

R 11.4.3 Midwives working for THS are covered by vicarious liability, those employed by Community Controlled Organisations need to ensure the employing bodies have adequate insurance cover.

Doctors

R 11.5.1 Doctors involved in community birthing to have a Diploma of Obstetrics and Gynaecology and evidence of ongoing education.

R 11.5.2 Doctors involved in community birthing to have insurance for obstetrics (either individual insurance or covered by their employing body).

External Support

R 11.6.1 A protocol be developed to cover safety issues, guidelines and procedures for those women who are already choosing to birth in the community, including those who do so against medical advice.

R 11.6.2 An exchange program be established between RDH and Remote to allow health workers and midwives to come in for updating of skills.

R 11.6.3 Emergency on call obstetric and paediatric support, either via the phone, or with the ability to fly out to the communities if needed, be established.

Prior to Trialing Community Birthing

R 11.7.1 Completion of Phase 3 of the project, the economic evaluation.

R 11.7.2 Community birthing be assessed in a trial situation that is resourced fully (as per Minimum Standards) with adequate back up.

CONCLUSION

The aim of the consultation phase of the Remote Area Birthing Project was to talk to remote Top End Aboriginal women, and their service providers, about women birthing in their communities. For some women this would mean birthing on their traditional land. The consultation included discussions on traditional birthing practices, current services and future directions. Past practices have not been discussed in this report due to the sensitivities involved, but they gave the interviewer an understanding of the differing cultural practices that occurred across the regions. Women in remote areas were very interested in discussing birthing practices. Many concerns were raised about the current services available in the regional centres and suggestions for improving these services, at varying levels of cost to the government, were made by both the women and the service providers.

As previously stated in this report, it has been shown that an ability to control one's actions and be involved in decision making that will affect one's health can, in itself, influence an individual's wellbeing. Women in the bush are demanding better choices and more control in childbirth. Some women want to deliver on their own land in their own community. If THS is to make remote area birthing a real choice for women it must be introduced properly and resourced adequately or it could have a direct negative affect on the morbidity and mortality of remote Aboriginal women and their children.

As service providers we must make birthing in regional centres a real option, where women feel safe and comfortable to come and await the arrival of their new baby. Offering hostels where women lose their money within hours of arriving, where they are bored, where they fear for their safety, and where food is not provided, is offering a substandard service and this is not a real choice for women. It should not be seen as paternalistic to ensure the hostels supply food, when the remote area women have identified it as such a major concern. The health of the fetus and the birthing experience of the pregnant woman will imprint upon the life of this new person well into adulthood. The birth weight alone is linked to the development of chronic diseases in adulthood and as a consequence, affects future health and health finance planning.

The high rates of morbidity and mortality of the Aboriginal population in the Top End demand that these issues are addressed. Money spent to improve antenatal care must be seen as an investment in the future. It is interesting to note that many women in the Katherine region expressed satisfaction with their regional services. They have a lower rate of community births, do not seem to want community birthing as much as the other regions, and the birthing environment of Katherine hospital is seen as being '*very pleasant and friendly*'.

Women must be given back the control of their birthing experience. If they wish to have a support person in labour, this should be encouraged and supported through the PATS system. As previously identified, support in labour can decrease fear and lower the rate of intervention in labour, including the caesarean section rate. As well as improving the outcome for the client, a reduction of obstetric intervention would mean a cost saving for the health care provider. Labouring women should all be actively encouraged to birth in the traditional squatting position on a mat on the floor, as women do not find this such a shameful position.

A health worker or an Aboriginal grandmother should be trained and employed to work in each of the birthing units in the regional centres. They could offer support in labour and at times act as interpreter, even if they did not speak the same dialect as the woman they could communicate in Kriol. The birth attendant could inform the staff when the woman does not understand procedures (as many women will accept treatment when they do not fully understand it, presuming that the medical staff know best). There are some Aboriginal people who can speak as many as 11 different languages, a person with these skills, who was a trained interpreter, would be invaluable in the hospital setting.

Health workers should be given the opportunity to do post graduate studies in midwifery. Current midwifery skills must be seen as an essential requirement in at least one member of the remote area nurses in each community. As one of the obstetricians stated '*midwives save lives*'. Ideally there would be more than one midwife in every community, otherwise it would be difficult for the midwife to leave for holidays, inservices or even weekends away, without feeling as though she may be compromising the health of the pregnant women in the community. There are often two midwives needed at deliveries, one to care for the mother and another for the neonate.

Community health centres have a variety of different equipment and there appears to be no standardised approach across the Top End. Health centres have many problems associated with repairs and maintenance and when they need to send equipment away they may be without it for months. Some health centres have excellent equipment and computer data bases, but because the staff with expertise in these areas have left and they were not given an adequate handover time, they are not being used. These issues need immediate attention.

The collection of information and statistics is also erratic. Some health centres meticulously maintain both a birth book (to document details of every birth from the community), and a delivery book (to document all details of every birth that occurs in the community). Other communities do not even have a delivery book and have birth books that are often not filled in. There should be a standardised approach across the Top End.

There are no guidelines in place for what to do when women do not return for antenatal visits and this is handled very differently in many communities. Some send a reminder note via the post office, others send a message with a health worker and other health staff choose to wait for the women to self present. Staffing numbers are so short in some communities that the staff feel unable to deliver comprehensive antenatal care.

Remote area staff feel they are in a vulnerable situation as some women are choosing to birth in the communities or are birthing prematurely and they do not have the equipment, and at times the expertise, to adequately deal with some situations. Many people feel that enabling women to choose to birth in their community may improve antenatal care and possibly even outcomes for some women.

A comment of interest was *'is it ethical to allow women who have the worst morbidity and mortality in Australia to choose to deliver their babies in a bush setting that may be several hours away from specialist help and intervention?'*. The opposing end of the spectrum was described by this comment *'is it ethical to refuse women the choice when we cannot say with absolute certainty that their outcomes will be better in a hospital environment?'*.

SECTION TWO

DARWIN RURAL DISTRICT - REGIONAL CENTRE

Overview

Royal Darwin Hospital (RDH) is the major referral centre for 17 community health centres in the Darwin Rural and Remote District, including the three towns of Jabiru, Batchelor and Adelaide River. The population of the Darwin rural district is 13,000. Darwin has two hospitals with birthing facilities: RDH and Darwin Private Hospital (DPH). DPH is not accessed by Aboriginal women from remote communities. RDH is a 297 bed hospital with a six bed birthing unit, a 32 bed maternity ward for both antenatal and postnatal women, and a nursery that is equipped to manage intubated babies. RDH is the major referral unit for the Top End and average 1,400 births per annum, with approximately one third being to Aboriginal women.

There is a very busy antenatal clinic that operates four midwives' clinics and five doctors' clinics each week. The antenatal clinic only operates in working hours and women often have to wait one to one and a half hours to see a doctor (in a waiting area that is busy, crowded, has uncomfortable chairs and services men waiting for other clinics). Staff feel that services could be streamlined with quicker service if midwives had access to appropriate rooms to perform full antenatal checks on low risk women when the doctors clinics were operating. Danila Dilba Medical Service also runs an antenatal clinic, but this is accessed mainly by urban based Aboriginal women. The majority of remote women receive their care at the hospital.

When antenatal women come into town they usually stay at a hostel until labour commences. There are five hostels that the majority of antenatal women stay in unless they are staying with family. Security is a problem with most of the hostels and women can have problems with drunks and people who want to take their money. One hostel that caters for a lot of the antenatal women does not provide food. This is an issue that has been raised by women in every community that has been visited. Transport to appointments or the airport is by the Aboriginal and Islander Medical Support

Services (AIMSS) bus that operates from 6.30 am to 8pm Monday to Friday. Transport at other times is usually by taxi, which women have to pay for themselves.

If an antenatal woman needs close monitoring without requiring admission to hospital she is usually admitted to the self care facility which is a minimum care area on the hospital grounds. It is a secure building with food that is provided from the hospital, and is a very popular place to stay. Antenatal classes are run by the hospital but are usually booked out months in advance and are unable to cater for all who want them. This is a service that is not accessed by remote Aboriginal women. Another provider of antenatal education is the Childbirth Education Association who run classes for \$80 and have videos and a library available to members (membership \$15). The community care centres are not providing antenatal care or education. Danila Dilba is planning to run classes in the future. At present women get information and education on a one to one basis at their community health centre, none of whom have the resources to run classes. Structured antenatal education is not available for most women, particularly Aboriginal women, in the Darwin District at present.

Summary of Consultation

Prior to visiting the communities, background research was undertaken to ascertain the history of this project and to discuss remote area birthing and current service provision with key stakeholders. These key stakeholders included people who had worked on this project in the past, those that are currently involved in remote Aboriginal women's birthing care and needs, doctors and midwives from the hospital, and people involved in women's health and hostel accommodation. Discussions were held with staff from Alukura, the women's birthing centre in Alice Springs, and people who were involved in the Queensland consultation regarding Aboriginal birthing on homelands. A total of 66 workers were consulted.

General Themes

Overview

Several people felt that *'this consultation is very important as the issue needs to be put to rest one way or another'*. People thought that some women will want to stay in their communities whilst others will prefer to come to town but it would be good to be able to offer women the choice. Generally most people felt that a *'pilot study would be necessary to evaluate the safety of birthing in the bush'*. Many believed that communities would never be adequately staffed to be

able to offer birthing safely. A pertinent remark was *'how would THS feel about resourcing non-THS clinics?'*.

Safety

Everyone was concerned about the safety issue. Some people felt that birthing could be offered safely in the bush if it was resourced adequately with appropriate community consultation and support. Others said that birthing is already happening in the bush, *'where are the statistics to prove that it is not safe?'*. Many believed that for low risk women, it could produce better outcomes than a hospital birth. Suggestions included a dedicated flying squad with an Obstetrician and Paediatrician who are able to fly out to communities if needed. Alternatively, some people were adamant that birthing in communities should never be sanctioned as *'women do not truly understand the risks, so are unable to make informed decisions... we are unable to get experienced staff and the logistics of it are impossible!'*.

Social Issues

A remark that was echoed by many people was *'I would never leave my family at such a vulnerable time to come to town by myself to deliver my baby, and I do not think we should expect Aboriginal women to do it. It can cause bonding problems for the baby and the family'*. The disruption to the individual and family were a primary concern. People felt that the services in town need to be improved, most women are not allowed official escorts, they are not fed in some hostels, they have problems with money and they are frightened in the hospital. One lady who was waiting to go into labour with her eighth child said *'I'm due tomorrow and I'm scared, I know that I shouldn't be frightened and want an escort, but I am'*.

One suggestion was to extend the self care facility at the hospital and have an antenatal wing attached that was open to all antenatal women. Many suggested that a birthing centre, with an Aboriginal section and a non-Aboriginal section could work very well. Others felt that all women should be together in a birthing centre as they could all learn from each other. One reason given for why women will not come in was because they had ceremonial obligations that were more important than birthing their baby in a regional centre.

Escorts and Support in Labour

The majority of people believed that all pregnant women should be allowed an escort. People believed that there should be more Aboriginal Health Workers employed at the hospital, in particular, one for the birthing unit. Another suggestion was that a midwife be employed to work specifically with the pregnant women from remote areas: for antenatal care and education, and intrapartum support.

Summary

The majority of people believed that the issue should be researched further with a controlled trial as *'nobody really knows what the outcomes would be'*. Two major concerns were: communities are already so poorly resourced that they should not have to cope with this added workload; and, there may not be support from obstetricians for such a trial.

DARWIN RURAL COMMUNITIES

MANINGRIDA COMMUNITY REPORT

Community Overview

Maningrida is situated on the Arafura Sea in Arnhem land. It is serviced twice a day by an Air North flight and the strip is all weather with pilot controlled lighting. It is one hour and ten minutes flight from Darwin in a King Air Aeroplane and accessible by road only in the dry season. The road trip to Darwin can take between five and ten hours depending on the state of the road. The town was established in the 1950s as a trading post and is still serviced by a weekly barge from Darwin. There are seven major tribal groups, most of whom will speak at least one of the three major languages from the area. Comprehension of English is good generally; older people however, have a limited understanding. Unsealed roads creating continual dust in the air, insufficient housing and overcrowding, contribute to the high morbidity of the population.

Maningrida and outstations have a population of approximately 2,200 people and over the last eight years they have had an average of 64 births per year from the region. There are up to 36 outstations with around 28 being populated at any one time. Many of these will be cut off in the wet season and in the dry are accessible by a range of methods comprising plane, car and boat. The health centre staff do regular trips to the outstations and many of the younger people are very mobile in between the outstations and Maningrida town. During the wet season some outstation people move into town which adds to the problem of overcrowding. Communication is via telephone and some of the outstations have solar powered phones, although some do not have any way of communicating without having to travel to neighbouring outstations. Mobile phones do not work in the area.

The community has a local school, store, video shop, bakery, takeaway food outlet, credit union and an outstation tucker run. Major organisations in the community are the local council, Maningrida Progress Association (MPA) and the Bawananga Aboriginal Corporation (BAC) which is the outstation association. All three have a building team and both MPA and BAC have their own aircraft. The school has a preschool, primary school and high school up to grade eight. Also

provided is an outstation education service whereby five teachers service 13 outstations. BAC manage the Arts Centre and Museum and employ a training officer who offers short courses within the community. Unemployment is high and many people in the community are working for the Community Development Employment Program (CDEP). There are two Territory Police Officers and one Aboriginal Community Police Officer working in the community. Kava had been identified as a community problem but is not available at the moment in the Territory. There is no local club and alcohol is allowed into the community once a fortnight by barge when ordered in advance. Anecdotal evidence suggests that a high percent of young men, and very few women, smoke marijuana.

The Maningrida health centre is run by Territory Health Services, although negotiations between the community, the Territory and Commonwealth governments have been proceeding for several years to move towards a community controlled health centre with a local health board. Funding for a new health centre (\$2.2 million) and an aged care centre (\$1.5 million) has been on hold until these negotiations are complete. The present health centre was built in the seventies and although it has had an extension comprising an outside area, a separate men's health centre and two consultation rooms, the design does not provide enough private consultation rooms and clients are still being assessed in the waiting areas. The health centre has a back up generator for when the main power is cut in the wet season and one phone line is able to continue operating.

Staffing levels are variable and at the moment consist of two Senior Aboriginal Health Workers (one female), two class three Health Workers (one female), and two trainees (one female); seven nurses (five female) of whom four are midwives and two full time medical positions, one of whom has a Diploma of Obstetrics. The health centre operates from 8-4.30pm Monday to Friday and 9-1pm on weekends. They provide a 24 hour on call service but are not staffed for inpatient services. Emergency evacuations are by Air Medical Service to the regional centre which is Darwin.

The women's room is air conditioned and has an older style obstetric bed with overhead lights. They have an old thermo regulated portacot which warms up most of the time. Equipment includes a fetal heart doppler machine, IVAC machine and both neonatal and adult intubation equipment. They do not have an overhead heater, a headbox for oxygen or a defibrillator machine. Antenatal care is

performed by a midwife who liaises closely with the nurse manager and female doctor. There are no antenatal classes in the community, although antenatal education is given on a one to one basis by the midwife, as workload permits. Ultrasound scans are performed by Northern Territory Imaging who visit the community once every four to six weeks. An obstetrician/gynaecologist visits the community for two days every three months.

As previously stated, over the last eight years there has been an average of 64 births a year with a mean of nine (14%) being born in the community each year. Some of these women had received antenatal care, had made the choice to deliver in the community and delivered at the community health centre. Others had delivered healthy babies at 36-38 weeks gestation prior to being transferred to Darwin and had then stayed in the community.

Table 5. Number of births to women from the community and the number and percent of births in Maningrida for the years 1990-98.

	1990	1991	1992	1993	1994	1995	1996	1997	1998
Births to women from the Maningrida region	74	66	57	72	66	68	63	42	42
Births that occurred in the Maningrida region	11 15%	6 9%	12 21%	13 18%	10 15%	7 10%	9 14%	4 9.5%	7 16%

Summary of Consultation

Three days were spent in Maningrida. Molly Wardaguga, retired Senior Aboriginal Health Worker with 28 years experience, was hired as a facilitator. Fifty two people were involved in meetings (43 women, three health workers, four midwives, one doctor and a male witchdoctor⁵⁵). Women from the three major language groups were interviewed including four of the seven tribes. Meetings were held spontaneously, often under trees and in small groups, although some were on a one to one basis. One visit was organised to an outstation to see all Aboriginal outstation teachers who were gathered together for a Batchelor College course. Molly was present at most meetings and interpreted as well as facilitated. At times English was used but often conversation slipped between

one of the local languages, English and Kriol. One group of women was a younger age group and conversation was in English. They did not agree with everything Molly said and were happy to state this. Many of the Kungu tribe in particular felt that they would prefer to stay in Maningrida or their outstations for the birth of their child.

General Themes and Alternative Suggestions

Safety

This was an important issue to all women. They felt that anyone with significant risk factors should deliver in Darwin. They were able to identify some risk factors:- *'weak blood'*, *'anyone who is too skinny or too small'*, *'asthma'*, one health worker suggested grand multiparous women were high risk and many people suggested women having their first baby should go to Darwin. One woman said *'it is better to deliver in the community even if it is not as safe'*.

Choice

Women felt that choice was an important factor when deciding where to deliver. They believed that low risk multiparous women should be allowed to deliver in Maningrida. Some felt that it would be safe for them to deliver at home with a traditional midwife or the woman's family, as they could call the nurse midwife if there were problems.⁵⁶ Every group identified choice as one of the most important factors concerning childbirth.

Escorts

All women including health staff felt it was important for primiparous women to have an escort, regardless of their age. An overwhelming majority of women believed that an escort was not necessary for a healthy multiparous woman. Women were concerned about the language barrier when in Darwin. Many complained that they did not understand what happens to them in Darwin. Women have been told *'there are plenty of Maningrida people in Darwin if they need an interpreter'*, but often these people are not of appropriate skin group to be able to talk to them. This situation is particularly pertinent in labour when the women are in pain, having difficulty understanding things, and are asked to consent to medical interventions. They felt that more

⁵⁵ Commonly used term in this community for a traditional healer / medicine man.

⁵⁶ Health staff were not happy with this suggestion as they would prefer to be involved from the beginning rather than be called in when problems arise.

Aboriginal staff working in the hospital would help this situation, *'even if they do not speak your language they will be able to communicate in Kriol'*.

Hostels

Many women felt that a hostel on the hospital grounds, or an extension of the self care facility that is already there, would make a safe place for women to stay. This facility would need to be secure and to provide food. Some of the hostels in Darwin do not provide food and as a consequence women felt that they did not tend to eat well when in Darwin.

Support in Labour

Women felt that it would be better if there was someone who could stay with them in labour. Ideally this would be a relative, (grandmother or auntie) who does not have family responsibilities, can stay with them in town, and go into the labour room with them. A good alternative to this would be if the hospital employed someone who was Aboriginal and worked in the labour ward. Many women told of being in labour and not being able to understand what is being said to them. They often felt frightened in hospital.

Positions in Labour

Women felt that it was better to birth the 'Aboriginal way'. This involves sitting on flexed legs with their heels under their bottoms and their knees spread out. They said that this was better for the baby to come out straight and down and the women do not feel as vulnerable in this position as they do when they are lying on their backs with their legs spread open. These women were mainly the older women. The health staff felt that the traditional way of birthing is not being explained to the younger women who often tend to lie down for the birth of their babies. Having older women with them in labour could help to change this.

Training

One suggestion was to have a training centre in Maningrida to teach women about childbirth and what will happen in hospital. These women could then be the support women for their language groups and go to Darwin with the antenatal women. They felt this was more appropriate than

holding antenatal classes, as the women who have learnt about the hospital ways can then teach the young girls.

A Birth Centre in Darwin

This concept required explanation as very few women had ever heard of a birth centre, or been to Alukura. The concept was warmly embraced. The majority of women felt that a centre on the hospital grounds that catered for all women (Aboriginal and non-Aboriginal) was the best option. They felt that one section could be made appropriate for Aboriginal women and another for non-Aboriginal women. Women felt that this centre should have a hostel for antenatal women and their escorts, and supply meals. This would be a safe place to stay, without the transport problems of other hostels.

The staff wanted to know *'what ever happened to the birthing centre in Darwin, it was an election promise!'*. They felt that it would be a good idea and could be very successful if consultation occurred with the right people, including the Larrakeyah people. They felt that the success of a birthing centre would depend a lot on the staff that worked there.

Additional Comments from the Health Staff

There were various points of view from the health staff. The female health workers felt that low risk women should be able to choose to deliver in the community, but only if they want to. They said they enjoyed delivering babies with a midwife if it occurred during the day, but did not like doing it during the night. The midwives and doctors felt that community birthing should only be available to low risk women who attended antenatal care, *'but even then, there can be unexpected problems'*. They suggested that the older women in the community would need to be involved, as at the moment *'women often get dropped off in labour and do not have support people to stay with them'*. They felt that adequate equipment, guidelines and protocols would need to be put in place and were concerned that community birthing may not be sustainable.

Staffing in the health centre was thought to be the major issue. Very rarely did they have a full complement of staff and birthing, particularly if it occurred after hours, could mean that several staff

members are on fatigue leave the next day. Recruitment of adequately trained staff who were able to access continuing education and updating of skills, would need to be supported by THS.

Another issue that was raised was that of insurance. Doctors would need to increase their insurance cover if they were going to electively participate in birthing, rather than at present where they are only involved in emergency birthing. The midwives were concerned that they may also need some form of insurance, though this would not be necessary if they are employees of THS as they are covered by vicarious liability.

Additional Comments from the Women

Women identified loneliness and distance from family, especially other children and husbands, as the biggest problems. Many women worried about their other children while they were away and felt that they were sent in to Darwin too early, *'a couple of weeks is too long to be away from the family'*. They suggested *'that women who have problems with other kids, especially when they are sick and you can't trust anyone else to look after them, should be able to take their children in with them'*.

Some women have problems with money when in Darwin, cheques do not get sent in, or get lost, or can't be cashed. Other women have been unable to pick up their cheques at the airport counter as they do not have any form of identification. Once they have their money they often get humbug from drunks and/or people demanding to take their money. This is a cause of great concern, especially for the younger women who feel unable to say no to their relatives. It is a particular problem when women are having to budget to buy their meals for the next two weeks.

Women said they did not feel safe in buses, and transport to and from the hostels, hospital and shops is sometimes inadequate and gets expensive when using a taxi all of the time. They complained of boredom when in Darwin waiting to go into labour, although some felt it was better to go to Darwin as there is more variety for shopping and it is cheaper for buying items for new babies. These were usually younger women who spoke very good English.

When women spoke about the hospital they said that *'you often get left in a room by yourself, where it is too cold, all white and not at all homely'*. *'They should have someone who can sit with you, a friendly face'* and there *'should be paintings on the wall, T.V. going... make it look like it is not a hospital'*. They also felt that there should be *'bush tucker to keep women strong, especially fish and crabs... too much Balanda food at the moment, which is not good'*.

Feasibility of Birthing

Maningrida women, particularly outstation women, were the most vocal in stating their desire to birth in their community. In fact they are already having 9-21% of deliveries there a year. Many of whom are women who are formally choosing to stay in the community. Staffing levels are adequate to support remote area birthing when they have their full complement, (although this rarely occurs). The staff were mixed in their opinions but the majority were interested in exploring the project further, emphasising that it would have to follow strict guidelines and minimum standards. Maningrida has most of the resources necessary for community birthing although the distance from Darwin is a barrier to emergency intervention. If pilot projects were to occur Maningrida would need to be considered as a potential community for the project.

TIWI ISLANDS REPORT

The Tiwi Islands are made up of two major islands, Melville Island which is where Milikapiti community and Pirlangimpi community can be found and Bathurst Island on which there is Nguiu community. Nguiu is the largest and was chosen for the consultation but on the first visit there was a funeral and a late decision was made to visit both Milikapiti and Pirlangimpi. The second trip to Nguiu was at a more appropriate time and was very successful.

Nguiu is participating in the co-ordinated care trials and the Tiwi Health Board has been established. They receive money directly from the Commonwealth and Territory governments and purchase medical and public health services from THS. The health centre staff are employed directly by the Tiwi Health Board and are not working under the state award. It is envisaged that both Pirlangimpi and Milikapiti will also be managed by the Tiwi Health Board some time in the future but at present, they are still managed by THS.

NGUIU (BATHURST ISLAND) COMMUNITY REPORT***Community Overview***

Nguiu is situated on the south east side of Bathurst Island approximately 80 km north of Darwin. It is only a 15-20 minute flight from Darwin and the bitumen strip is accessible all year. It is serviced by two airline companies with two to seven return flights a day between them. The community was initially established as a Catholic Mission in 1911. The two languages spoken on the island are Tiwi and English. The population is approximately 1,600 and over the last eight years they have had an average of 30 births per year. There is one outstation about an hours drive from Nguiu called Wuranguwu. The outstation gets cut off when there is too much rain and although they have a small airstrip this can also be unserviceable in the wet.

The community has a president, town clerk and a council with 16 members. They have two Aboriginal Community Police Officers, who liaise with the Territory Police who are located in Pirlangimpi. Nguiu has a store, two tuckshops, a restaurant and a banking and post office agency. Schooling consists of a pre-school, two primary and two high schools (segregated into male and female), and a creche is available for the one to four year olds. The CDEP scheme is operating and there is a club which opens for restricted hours six nights a week. They have a night patrol bus which operates every night of the week and a women's shelter. Tourists regularly visit the island, usually with an organised tour operator.

The health centre is administered by the Tiwi Health Board and staffed with 13 health workers, three nurses (all midwives, although one is male) and two doctors (one male and one female). The health centre is a large square building that has a grassed waiting section in the middle of it. The co-ordinated care trials are being trialed at Nguiu and computer stations have been placed in most of the consultation rooms. Computer training for all the staff has occurred. A new building that is to be a renal dialysis unit has been completed but is not yet operational. The health centre has a back up generator that cuts in automatically when power is lost (not uncommon in the wet season) and a satellite phone that can be used if the power is lost. Health problems that were identified by the

community were renal disease, diabetes, alcohol, marijuana, gambling and youth suicide. Successful programs mentioned were family counselling and the Strong Women's program.

The health centre has a women's health room that has equipment for normal deliveries, neonatal resuscitation and has an old, small thermoregulated portacot. They have a fetal heart doppler machine, ECG machine, adult and neonatal intubation equipment and a defibrillator. They do not have an overhead heater, ultrasound machine or headbox. One of the midwives works primarily in the women's health area and attends most of the antenatal care. She liaises with the health workers and doctors when necessary. Education is given on a one to one basis as workload permits. The ultrasonographer visits once a month and the obstetrician visits for one day every three months. The community are having an average of 30 births a year with a mean of 2 (7%) being born on the community (usually premature ones). Most women are receiving antenatal care.

Table 6. Number of births to women from the community and the number and percent of births in Nguiu community 1990-98.

	1990	1991	1992	1993	1994	1995	1996	1997	1998
Births to women from Nguiu	31	20	31	27	35	35	25	31	33
Births in the Nguiu community	1 3.2%	2 10%	2 6.4%	1 3.7%	4 11.4%	1 2.8%	1 4%	4 13%	3 9%

Summary of Consultation

Two trips were taken to Nguiu as the first trip coincided with a funeral and was not a good time to talk to women about birthing, although discussions were held with the health staff at that time. The second trip was more successful and two women were hired as facilitators, Judith Mary Puruntatameri and Leonie Tipiloura. A total of 85 people were consulted, 74 women, four nurses (all midwives, one was a relieving staff member) five health workers and two doctors. One of the gatherings was a youth group with 28 young women present. All meetings were held in English or Tiwi and the facilitators interpreted for the interviewer. Meetings were held where women were working, at the art centre and creche, and others under the shade of a tree.

General Themes and Alternative Suggestions

Safety

People believed there should be no compromise in the safety of the babies and mothers. They felt that all primiparous women and high risk women should continue to deliver in Darwin.

Choice

Women felt it would be good to have some form of choice about where they deliver, at the moment they only have one option and that is to go to Darwin Hospital. The staff felt that if women were to deliver in the community it must be an informed decision and their own choice. They were worried that if community birthing was to commence, women would be pressured to stay in Nguiu to deliver when they would prefer to go to Darwin.

Escorts

All women felt that primiparous women should have an escort when going to Darwin for the birth of their child. Many women felt that all women should have company. A large majority of women do have a support person who pays his or her own way.

Hostels

Tiwi women felt that they did not like going to Darwin since the Catholic Missions hostel had closed. They felt they should have their own hostel to stay in '*just for Tiwi people*'. The self care unit at the hospital is a popular place to stay and they thought it should be extended to allow all antenatal women to stay there. They felt that three meals a day should be provided and suggested that St. Vincent de Paul may be able to cook meals for people who stayed at Ebirra.

Boredom

Women complained that there was nothing to do in Darwin, '*no classes or anything*'. They said they get lonely and bored and run out of money too quickly, just trying to keep themselves entertained.

A Birth Centre in Darwin

They liked the idea of a birth centre on hospital grounds, where there was a family atmosphere and the escorts were allowed to stay with the women. Tiwi women felt a birthing centre should be available for all women and the younger girls should be able to take their partners if they wanted.

A Birth Centre in Nguuu

Women felt that a birthing centre on the island would allow the families to be nearby for the birth and the women could have a midwife, a health worker, their grandmother and mother with them in labour. They also felt that they would no longer need to worry about leaving their other children at home. Some women mentioned that a separate centre would be good as there are too many spirits in the health centre, *'too many people have died there over the years'*. Another problem with the present health centre was space. Women were concerned that there was not enough room to have all their support team with them in labour. The younger women were worried that if a birthing centre was set up on the island they would not be able to choose to go to Darwin to deliver. They were also worried that there could be problems if women were labouring when the club was open and their husbands were getting drunk. They decided the husband would need to be banned from the club around the time the baby was due. Another problem about delivering on the island was the price of supplies for new babies in the shop.

Additional Comments from the Health Staff

The staff were in favour of birthing on the island if it was to be done properly. *'As service providers we would love to be able to offer birthing, it is good for staff moral, and a good delivery can have the staff on a high for days'*. *'It would mean we could offer an active birth and it would increase job satisfaction'*. They felt that it may also improve antenatal care. *'This is a critical time in the babies' and mother's life, there should be no limit to the money spent on their health, it will save in the long run'*.

The health staff felt that they would need more equipment but they should have it anyway as there are already premature babies being born on the island. All equipment would need to be regularly checked and the women would have to understand that they may need to go to Darwin if there are staffing problems. Some of the health workers had delivered many babies in the past but said they

would like to update their skills. All staff said they would need to be able to access ongoing training and skills updates.

Staff believed that women with risk factors should not deliver on the island. They felt they should be *'be blunt about informed consent and could make a contract with the pregnant women... it may improve antenatal care'*. They also felt that it would be important to have a back up plan for emergencies. They would like to be able to call in an obstetrician or a paediatrician if they have an emergency. *'If the Air Medical plane is busy we must be able to charter a plane and bring the specialist and some blood out to the community quickly, at any time of the day'*.

Additional Comments from the Women

Older women felt it was very important, but also very difficult, to find out what the younger generation want as *'they are often too frightened to say what they really want'*. They felt that it would be wonderful for women to deliver on the island but were not sure if the mother would get enough rest. They felt that things were changing and the younger generation sometimes like to have their partners with them in labour.

Problems were identified when women stay with family in Darwin. They are obliged to provide food for the family and often run out of money very quickly. Another problem that occurs when staying with friends in Darwin is when women go into labour (especially if it is in the middle of the night) they do not have a phone in the house or any transport to get to the hospital. Women have been getting ambulance bills of \$150-200 when needing to get to hospital. When they need to send money in to women who are waiting in Darwin, it is free with Wimray but costs \$10 with Air North. Women then have to catch a cab to the airport to pick it up and it is often spent very quickly.

Feasibility of Birthing

The staff at Nguiu are very interested in pursuing the idea of community birthing if it is to be resourced adequately, with sufficient back up from Darwin, and only available to low risk women. The older women in the community thought it would be good but did not want to talk on behalf of the younger girls. Some felt the younger women might be interested whereas others felt they quite like going to town to deliver as they are able to do their shopping when they are there. The younger women said they would like to have the choice of where to deliver. They also felt that the shop on

the island should be able to stock everything the women need but were concerned about the prices and limited selection. Someone suggested that mail ordering could be utilised.

The health centre has most of the resources for community birthing and its close proximity to Darwin would make it an ideal place to do a pilot study. It is difficult to say if current staffing levels would be adequate to support such a program.

PIRLANGIMPI (GARDEN POINT) COMMUNITY REPORT

Community Overview

Pirlangimpi is located on the north west coast of Melville Island, 125 km north of Darwin. It is a 35 minute flight from Darwin and has three return flights a day Monday to Friday, two flights on Saturday and one on Sunday. The community was established in 1940 by the Catholic Missions as a place for part-Aboriginal children. It is now a community of approximately 250-300 Tiwi people who speak Tiwi and often English. The management of the island was taken over in 1963 by the Department of Aboriginal Affairs and then in 1983 by the Community Council .

The community airstrip has automatic lighting but is not an all weather strip and can be closed in the wet season. The health centre was built in 1971 and is in a good state of repair although the electricity to the health centre can be cut off in the wet season and there is no generator for emergency power. There is a store (that stocks very little for new babies), a police station with two Territory Police (who cover all the Tiwi Islands), a banking agency, a school, a bakery, a takeaway food outlet and a women's shelter.

Summary of Consultation

Pirlangimpi was only visited for one day and ten women were involved in meetings, (two health workers, one nutrition worker, one nurse and six younger women, all multiparous women). Most of the day was spent talking to the health and nutrition workers.

General Themes and Alternative Suggestions

Safety

This was an important issue to all women. Given present health services they felt that it was safer for women to deliver in Darwin.

Choice

Women felt that choice was an important factor when deciding where to deliver. They said it would be good if they had the opportunity to birth in Nguuu but thought most women would prefer to go to Darwin.

Escorts

All women felt it was important for primiparous women to have an escort, regardless of their age. They also identified a problem when the woman has other small children and suggested that if the women had children under four years old then perhaps they could come in with them. They would need an escort to look after the child when the mother was in hospital.

Hostels

The women felt that there should be a better hostel for women to stay in when they go to Darwin, preferably at the hospital. Self care was a popular place to stay. The hostel where Tiwi people liked to stay was the Catholic Missions Hostel (known as CMS) and it closed down four years ago. Women said '*they do not feel comfortable in any of the other hostels*'. Some hostels do not have lockable cupboards or rooms, and women reported problems with theft, especially of food from the fridge. They also said it would be good if the hostels were able to cash cheques for them as this can sometimes be a difficult procedure.

Support in Labour

The women stated that they would like to have a relative to be with them in labour. They felt that there should be Tiwi women working in the birthing unit. They thought this would be a good experience for the women and that there are enough Tiwi women in Darwin to be able to recruit someone.

A Birth Centre in Darwin

One of the health workers had been down to the Alukura in Alice and was very impressed by it. She explained the concept to other women who all thought it was a good idea. They felt it would be good to have a place for all women, and could have one side for Aboriginal women and one for non-Aboriginal women. They felt it should be close to the hospital.

Additional Comments from the Health Staff

Major concerns involved staffing issues. They felt there were not enough staff to be able to offer community birthing, if two staff were up during the night for a birth then there would be no-one to open the health centre the next day. Another concern expressed by staff was who would be blamed

if something went wrong? They felt Nguiu could be a good place to set up birthing but were unsure if women in the community would rather go to Nguiu or Darwin for the birth of their child. They were insistent that it should still be the woman's choice, and no-one should be coerced into delivering in the community, or at Nguiu, if they are not keen to do so.

Additional Comments from the Women

Women were worried that if they delivered in the community and there was a problem then the health staff could be blamed. They also said that '*cultural practices for childbirth are not important anymore... lost all that*'. Another problem if they were to deliver in the community would be the very '*limited range of goods for new babies at local shop... what is sold is very expensive*'. Major problems in Darwin involved money. Women need identification to cash cheques but many do not have it. When applying for identification in Darwin at Legal Aid women need a birth certificate, which very few women have. Transport was also mentioned as a problem in Darwin, particularly for women who do not have enough money.

Feasibility of Birthing

This is a small community of 250-300 people and the health staff consist of one nurse (who at present is a midwife), two full time and one part time health workers and a nutrition worker. A doctor visits for two days a fortnight. The health workers have done a lot of deliveries in the past but not so many recently. They would like to do deliveries again but feel they do not have enough staff to offer this service and would need a refresher course. There are no current statistics on how many births are occurring each year in this community but the health workers felt it was usually two or three per year.

Women who do deliver in Pirlangimpi are still being flown in to Darwin after the birth. It was unclear if this was because of medical reasons or just routine. The health centre has very basic facilities for a birth in the community and does not have a generator for emergency back up power (which is regularly needed in the wet season). There is no overhead warmer or thermo-regulated neonatal cot to assist newborn babies (particularly premature ones) maintain their temperature. The air strip can be closed due to heavy rain in the wet season. This community does not have sufficient staffing, equipment or resources to offer community birthing and is not suitable for a pilot project.

MILIKAPITI (SNAKE BAY) COMMUNITY REPORT

Community Overview

Milikapiti is located on the northern coast of Melville Island 120 km north of Darwin. It is a 35 minute flight from Darwin and has three return flights a day Monday to Friday, two flights on Saturday and one on Sunday. It is serviced by a barge from Darwin once a month. The community was established in 1942 and the community council was formed in 1983. The population is approximately 400-450 and speak, Tiwi and English.

The community airstrip is a bitumen strip with lights that can be turned on by a switch on the ground. It does not close in the wet season. The health centre is an older building and the electricity to the health centre can be interrupted in the wet season. There is no generator for emergency power. There is a store, a banking agency, a youth centre, an arts centre, a school, a takeaway food outlet and a women's centre.

Summary of Consultation

Milikapiti was visited for half a day on the trip to Nguui. Five women were involved in an impromptu meeting (two healthworkers and three young girls). The women were interested in discussing birthing and invited the interviewer back to have a big women's meeting. Unfortunately this did not occur due to the time limitations of the project. Nonetheless, the women's comments have been included.

General Themes and Alternative Suggestions

Safety

Women felt that it was too dangerous for women who were having their first baby to stay on the island. They felt they would be too frightened to deliver there.

Choice

Women felt it would be good to have the choice to be able to go to Nguui to deliver, although doubted that many women would actually do this. They felt it would be good to have the option to deliver in the community as then they would not have to worry about all the problems that happen when they are in town.

Escorts

They felt that all women having their first baby should be allowed to have an official escort. The younger ones might like to take their partners with them, or else they would like to take another relative. At the moment they are paying for their own escorts but this is a financial drain if they are not able to stay with family.

Hostels

Women said they do not feel comfortable staying at hostels since the Catholic Missions hostel closed down. They felt that there should be a hostel specifically for Tiwi people, or pregnant women should be able to stay at the self care facility at the hospital.

A Birth Centre in Darwin

They thought this was an excellent idea and should be for all women; Tiwi women, Aboriginal women and non-Aboriginal women.

Additional Comments from the Women

Women suggested that two or three weeks was too long to have to wait in Darwin and they should only have to go in for one week. Women feel that they get humbug from drunks who want to try and take their money when they are awaiting the birth. If staying with family they are expected to provide food which they often cannot afford. They may not have access to a phone which makes it difficult to get an ambulance if they start labouring in the middle of the night. They stated that they were frightened in hospital in Darwin where they were '*often left in a room by themselves, sometimes with the door closed*'. They felt they were '*given medicine and didn't know what it was for*'.

Feasibility of Birthing

This community is currently being staffed by health workers alone who do not feel happy about women delivering in the community. They feel that they do not have the equipment or staff to deliver these services. They did not have documented statistics but think approximately one birth a year would occur in the community. They do not have an overhead heater or a thermo regulated portacot to keep the babies warm. This community does not have the facilities for community birthing and is not suitable for a pilot project.

WADEYE (PORT KEATS) COMMUNITY REPORT

Community Overview

Wadeye is situated in the Daly River region of the Northern Territory, approximately 500 kilometres south west of Darwin. The population is approximately 1,800 with an average of 49 births each year. There are seven outstations populated all year and eleven more that have residents in the dry season. The health centre does not service the outstations at the present time. Wadeye is a fifty minute flight from Darwin and is serviced by Murin Air with either one or two return flights a day. A bitumen strip has just been completed at Wadeye. The road to Darwin is open in the dry season and takes approximately seven hours to get there. Wadeye has a monthly barge service from Darwin.

The town was founded by Catholic Missionaries in 1935 and attracted nine different language groups from the area. The town moved to its present site in 1938 as there was a better water supply and a good site for an airstrip. In 1979 administration of the town transferred from the Catholic Missions to Kardu Numinda Incorporated. Murin Association runs the outstation resource centre and has its own planes.

Administration of the health centre was handed over from the Catholic Missions to the Kardu Numinda Council in 1993. A new centre was built in 1995 and responsibility for management was transferred again, in 1996, to THS. The new health centre is in good condition but is poorly designed. Staffing levels vary, at present there are four nurse positions, eight health worker positions and day to day management is by an Senior Aboriginal Health Worker who has a non-Aboriginal mentor. A female doctor visits the community for three days a fortnight and a male doctor visits one day a fortnight. Although there is accommodation for a resident doctor, the police are utilising this and the community is not currently recruiting for this position. There is very limited accommodation for visiting health professionals and as a consequence many are unable to visit the community.

The community has a local store, a take away, a Traditional Credit Union and post office outlet. The sewing centre has recently been opened and doubles as a women's centre. The Catholic Missions operate the primary and post primary schools (which only allow Aboriginal children to attend) and

the adult education centre. There is an aged care hostel that is run by the Catholic nuns and provides day care and a meals on wheels service. The Catholic Missions are also involved in the Alcohol Awareness and Family Recovery Program. The local club stopped selling alcohol in 1995 and now operates as a social club. People wanting to drink alcohol are able to take a bus to a nearby community that has a club operating most nights of the week. The police station has three Territory Police, one Aboriginal Community Police Officer and an Aboriginal Community Corrections Officer.

The health centre is open from 8.30-5pm Monday to Friday and staff provide a 24 hour on call emergency service. Emergencies are evacuated by the Air Medical Service. The women's room is air conditioned and has an obstetric bed. There is a portable light which cannot be used when power is lost, so there is no emergency lighting in the room. The health centre does have a generator that provides power when it is lost, (usually in the wet season) but not for the women's room. Equipment includes a fetal heart doppler machine, thermo-regulated portacot, defibrillator, both neonatal and adult intubation equipment, IVAC machine, stirrups, forceps and a bean bag. They do not have a headbox for the delivery of oxygen. Antenatal care is performed by a midwife who liaises with a health worker and ultrasound scans are performed by the visiting doctor with a portable machine. An obstetrician visits the community for one day every four months.

The average number of births to women in the community was 49 births per year with around four

Table 7. Number of births to women from the community and the number and percent of births in Wadeye for the years 1990-98.

	1990	1991	1992	1993	1994	1995	1996	1997	1998
Births to women from Wadeye	52	56	51	55	49	57	50	39	33
Births in the community	3 5.8%	8 14.3%	3 5.9%	7 12.7%	2 4.1%	6 10.5%	6 12%	3 7.7%	1 3%

(8.4%) being born in the community each year.

Summary of Consultation

Three days were spent in Wadeye and a previous Strong Women Worker, Eileen Gumbuduck, was hired as a facilitator. Meetings were held in the sewing centre, the pensioner's day centre and the health centre. A total of 57 people were consulted, including the midwife who works in the women's health area, six health workers, Strong Women Workers, elders in the community and a group of younger women workers.

General Themes and Alternative Suggestions

Safety

Women felt that safety is very important and any woman that is high risk should go to Darwin to deliver. They also had concerns about their safety when going to Darwin as they felt that there were always people who would humbug them and try to take their money, especially the young girls.

Escorts

Women felt the younger girls should definitely have an escort who is an older woman and able to look after them in Darwin. In particular, they would stop them from being bothered by drunken people, and losing their money to the town relatives. At the moment the family try to send an escort to stay with the antenatal in town but this is a financial drain on the family.

Hostels

Women felt that there should be one hostel for all antenatal women so that they could stay together. They felt it would be good if it was on the hospital grounds like the self care centre. They felt it was very important that the hostels provided food for the women.

Positions in Labour

Women thought they *'should be able to birth squatting, with an older woman behind to support and massage your back, this would be much better than lying on your back in a cold room with a drip in your arm'*.

A Birth Centre in Darwin

This subject caused a lively discussion. Initially women disagreed as some felt that a birth centre should be for Aboriginal women only while others felt it should be for all women. They finally agreed that it should be for all women and Aboriginal women should have one side of the building and non-Aboriginal women should have the other side.

Additional Comments from the Health Staff

Health staff felt that all primiparous women should have an escort when going to Darwin and the women should have food supplied for them. They thought it would be safe for the healthy multiparous women to stay and deliver at Wadeye but do not have enough staff at present. They were worried about delivering women in the community, *'if something goes wrong who will be blamed?'*.

Additional Comments from the Women

The women thought it would be good if the midwife and health worker could get together with the Strong Women Workers to provide antenatal classes for the young girls. The women felt the hospital was *'much too cold and should provide healthy tucker for them... too much sweet food in there'*. They also felt it would be better if there was an Aboriginal health worker in the birthing unit as well as *'more Aboriginal health workers throughout the hospital'*. They said they *'do not like having male doctors involved in birthing or women's business'*.

Feasibility of Birthing

Over the last few years this community has had a very high turnover of staff, many of whom have had very limited or no remote area experience. It is poorly staffed at the moment and barely able to carry out any program work. Both the health workers and the nurses feel they are only just managing to deal with the demands of acute care on a 24 hour basis. The staff felt they would love to be able to provide a birthing service but it is not practical on current staffing levels. The women felt that it is something that should be looked at for the future. This community is not suitable for a pilot project based on current staffing levels.

EAST ARNHEM DISTRICT- REGIONAL CENTRE

Overview

Nhulunbuy (Gove) is the regional centre for the East Arnhem district which has a population of approximately 11,500 (around 4,000 live in Nhulunbuy). There are 12 Community Health Centres in the region though one is not staffed in a full time capacity. Of the twelve Rural Health Centres within the District, eight are run by THS and four receive THS and/or Commonwealth grants and are run by Community Councils.⁵⁷ Gove District Hospital (GDH) is a 30 bed hospital and has an eight bed maternity unit (on the second floor), two delivery suite beds, and 170-190 deliveries a year. They have one Obstetrician who is relieved for holidays by staff from Darwin, and several of the doctors in town have their Diploma of Obstetrics. They do not have a resident Paediatrician or a nursery so all high risk deliveries and any premature labours under 35 weeks gestation are transferred to Darwin.

Women from the East Arnhem district are covered by the PATS budget to come in to Nhulunbuy (the nearest centre) to await the birth of their baby. If they would prefer to go to Darwin then they are given a one way ticket and must find their own way home. Statistics on how many women would choose this were difficult to find, but travel staff in Nhulunbuy estimated it would be approximately 20-25 women a year, and most would be from Groote Eylandt. When women await birthing in Nhulunbuy they stay at the hostel which is managed by the Aboriginal Hostels Association. It is close to the public drinking hotel and not as secure as the women would like, though it does provide food.

There were plans to make a four bed self care unit on the maternity ward, but this initiative has stalled as the cleaners were not happy about it and approached their Local Member who then went to the Minister. At present a brief needs to be written by the Director of Nursing to go to the Secretary of THS who will make any further decisions. The women in the area and the midwives from the ward all support the initiative. Women receive antenatal care from the hospital which has one midwives' clinic and one doctor's clinic each week. Antenatal classes are held by the midwives.

⁵⁷ THS, 1998, *Territory Health Services Annual Report 1997/98*, N. T. Government Printers.

Summary of Consultation

Nhulunbuy was visited and discussions were held with the Director of Nursing at the hospital, the Rural Director of Nursing, midwives at the hospital and the staff at Miwatj Health Aboriginal Corporation. Miwatj were running a study session for their Health Worker Course and two groups of health workers were involved in discussions. The staff who work for the Layna Homelands (the Yirkala outstations) also came in for a meeting. Visits were made to two of the nearby communities, Yirkala and Gunyangara (Marn Garr-Ski Beach) where several meetings were held. These communities are close enough to Nhulunbuy for the antenatal women to stay home till they go into early labour at which time they can drive to the hospital. A total of 47 people were consulted in this area, in addition, two communities were visited and are reported on separately, Galiwin'ku (Elcho Island) and Milingimbi.

Two areas that were not included in the original consultation were Numbulwar and Groote Eylandt. Anecdotal evidence suggested that some women were choosing to stay in these communities for birth and that both areas had a significant number of premature births. Information about these communities was learned from discussions with staff in the regional centre and staff working in the health centres. Descriptions of these communities and reasons for not including them in the consultations can be found at the end of this section.

General Themes***Safety***

Health care providers thought that birthing in the bush would be welcomed by women but were worried about the safety of it. They stated that *'we need to do a pilot study to know for certain'*. Someone mentioned a Victorian study which showed health care practitioners are very capable of identifying high risk women and referring them to a larger centre. It also showed a much lower morbidity and mortality rate for those birthing in the bush. Some thought that *'birthing on communities may improve a child's ties to the land'*. Overwhelmingly people felt that *'staff in the bush need more support as some women will always choose to deliver out there... it would be better to sanction it and do it safely... it might improve antenatal and early labour care'*.

Escorts and Support in Labour

Everyone believed that all primiparous women should have an escort (and a large majority believed that all women should have an escort). *'Escorts are essential, especially valuable to help young girls with breastfeeding'*. People suggested that the service would be improved if there were more Aboriginal staff working in the hospital, particularly the birthing unit (at present Gove Hospital has only one Aboriginal Liaison person who is on extended leave and has not been replaced). *'Hospitals are very hostile environments and women are scared so they invariably do not labour well'*.

Choice

People believed that *'women should be given the choice to deliver in the community, not turned into victims where they try and hide from the staff and the plane... it is empowering to have proper choices'*.

Boredom

'Women get sent in too early, get bored and then abscond.... or they may have been having problems with humbug when they are at the hostel'. Health practitioners thought we were wasting a prime opportunity to improve the health and education of the antenatal women, *'they come into town and get bored, Aboriginal Resource Development Service should do classes for the women and teach escorts what to do when they are support people... the training could go out to the homelands'*.

Gove District Hospital

There was very real concern regarding rumours that Gove District Hospital was not going to retain its obstetric services. People felt that if this was to occur then many more women would choose to deliver on their communities, as generally women are too frightened to travel to Darwin. The health workers at Miwatj suggested that the smoking ceremony should be offered to all women who deliver their babies in Gove hospital, *'smoking will close up and heal the soreness of childbirth'*. They also thought it was important for the staff to ask women if they wanted to take their placenta home. *'The placenta should not be burnt as the mother might then get a sickness in the womb, it is alright to freeze it until it can be buried by the family at home'*.

A Birthing Centre

Aboriginal women felt that a birthing centre would be good but it must be in Nhulunbuy, not any of the communities, as there could be too much disagreement between different tribes.

Summary

The majority of people felt that birthing on communities would be a good thing for low risk women if there was the appropriate infrastructure and resources, with *'a flying squad as back up'*. Generally people were quite cynical about this issue and did not believe birthing in the bush would ever be resourced adequately. Others felt that as birthing in the community was already occurring, the health centres should have the appropriate resources. Particularly as many of the births are high risk and the equipment may be needed prior to evacuation, which could be hours away. Some thought that *'midwives may not be experienced enough to feel comfortable delivering out bush, they could worry about blame'*. They suggested that experience would be an important recruitment requirement but were worried that the Workforce Planning Unit did not realise how important it was to have experienced midwives in communities.

Numbulwar

Numbulwar is an East Arnhem community that has a population of around 1,000. Last year they had 10 births within the community, most of which were premature births and many had other risk factors. They have funding for a doctor but have been unable to recruit one. Current staffing is two nurses and four health workers and they feel their workload is already too much to even think about community birthing. Other obstacles include an airstrip that can be closed for up to five days in the wet, no generator at the health centre and only very basic equipment. Women do not like going to Nhulunbuy to await their birth and one of the reasons given for this was historical differences between the people.

Although some women from Numbulwar do wish to deliver in their community it is an unrealistic option for them given current resources and staffing. Considering the high number of births in the community (particularly the premature births), and the delays that can occur when needing to evacuate an antenatal mother with a newborn neonate, they should have all the equipment that is required for remote area birthing, including a generator.

Groote Eylandt

Groote Eylandt is also in the East Arnhem region and consists of three communities: Alyangula, Angurugu and Umbakumba. Alyangula is the centre for the mining community and has a health centre that caters mainly to residents of the town. The major health centre for the Aboriginal community on the island is situated at Angurugu. It has been having renovations for the last six months, while staff work from a makeshift house. It is approximately a 15 minute drive from Alyangula to Angurugu and an hours drive to Umbakumba. Staff are no longer resident in either of these communities due to safety concerns. Staff leave these communities to ensure they arrive back in Alyangula by 1700 hours. They do not go out to the communities after hours and people who require help must find their own way into Alyangula. They have had a high staff turnover. Many problems in the community are related to alcohol abuse. There is approximately one birth per month on the island, and anecdotal evidence suggests the majority of women have complicated obstetric histories.

This community is similar to Numbulwar in that many people do not particularly like to go to Nhulunbuy for health care. Groote Eylandt was not visited for the consultation as community birthing is an unrealistic expectation at present and current problems in the communities would have made the visit very difficult. However, as with Numbulwar, they should have all the equipment necessary for complicated deliveries in a remote setting.

EAST ARNHEM COMMUNITIES

GALIWIN'KU (ELCHO ISLAND) COMMUNITY REPORT

Community Overview

Galiwin'ku is situated on Elcho Island in the Arafura Sea and was established in 1942 as a Methodist mission. Galiwin'ku can be accessed by plane from either Darwin (1.5 hours) or Nhulunbuy (30-45 minutes) with daily return flights to both centres. The airstrip is bitumen with pilot activated lights and will only get closed if there are severe crosswinds. There are 16 different clan and language groups in the area, although most people speak the major language and some will speak English. Population estimates vary from 1,200 to 1,800 and will fluctuate depending on the season (at a recent health promotion exercise that treated all people including outstation residents, 1,200 people were involved). They have an average of 53 births a year from the community and outstations.

There are approximately 32 outstations in the area with around 15 being populated for most of the year. These are administered by the Marthakal Resource Centre. The health centre is not funded to provide a service to these areas. The town is administered by a town clerk and has a Community Council. The town has three takeaway shops, one store, a banking and postal agency, a school that caters for post primary students, two Aboriginal Community Police Officers and a women's centre. There is a building program occurring at present with 20 new houses being constructed. The C.D.E.P. scheme is operating in the community and there is no alcohol allowed on the island.

The health centre is funded by a THS Grant that is given to the Community Council to manage. The staff have recently signed an enterprise bargaining agreement. Present staffing includes four nurses (two are midwives and one is funded by a Commonwealth grant until August 1999), 12 health workers (10 females and two males) who work 60 hours a fortnight and one resident doctor (who is supported by a doctor visiting from Nhulunbuy two days a fortnight, when able). The health centre has recently conducted a community scabies awareness program that staff felt was very successful.

The women's health program is run by a health worker who liaises closely with a midwife and the female doctor. Equipment at the health centre includes an ultrasound machine, doppler, adult and neonatal resuscitation equipment, a defibrillator, stirrups, nitrous oxide and adequate lighting. They do not have an IVAC machine, syringe pump, headbox, humidcrib, overhead heater, oxygen saturation monitor, forceps or vacuum extraction equipment. Births at the health centre occur in the emergency room as the women's room is not properly equipped at the moment. The health worker responsible for the women's program has recently attended a training course to enable her to use the ultrasound machine for dating and basic morphology.

Birthing statistics for the community were difficult to assess. The statistics from the birthing book differed from the delivery suite book which differed again from the Epidemiology Branch and the community database. Births do occur in the community but they are not planned. On available statistics over the last nine years they have had an average of 53 births each year, with a mean of seven (13%) occurring in the community. Anecdotal evidence suggested that of the 10 births in the health centre in the last 12 months, half would not have received antenatal care.

Reasons that were suggested for women not accessing antenatal care included: that they did not perceive that they needed it; they were worried that they would have to go to town for the birth; and, they felt shamed if they fell pregnant too quickly following the last pregnancy, therefore did not want to acknowledge the present pregnancy.

Staff suggested that there were still a significant number of women who would be sent to town to await the birth but would return prior to having their baby. They also said that women who had delivered in the community were transferred out even when things had progressed normally. They felt that if women were allowed to stay following the birth then more women would try to deliver in the community and present staffing levels were not sufficient for this.

Table 8. Number of births to women from the community and the number and percent of births in Galawin'ku for the years 1990-98.

	1990	1991	1992	1993	1994	1995	1996	1997	1998
Births to women from Galiwin'ku	46	56	50	50	* 39	50	72	47	63
Births in the community	* 8 17%	* 9 16%	* 3 6%	6 12%	* 5 13%	3 6%	14 19%	* 5 11%	10 16%

* shows where numbers are thought to be incomplete.

Summary of Consultation

Three days were spent in Galiwin'ku and a facilitator was not organised prior to arriving on the island. This, together with transport problems, probably contributed to the frustrations that occurred on this trip. It was not a good time to visit as the health staff were experiencing a time of change. The Nurse Manager of 12 years had just left and future workplans and directions were being discussed. Time was spent at the women's centre, with the Strong Women Workers (including a bush trip) and with the health staff. A total of 25 people were consulted, usually in small groups at the women's centre.

General Themes and Alternative Suggestions

Safety

People felt that community birthing would be good if it could be implemented safely with more resources including extra equipment and adequately trained staff. *'It would need to be very well planned prior to implementation and trialed only with healthy women'*. The staff were worried about unreal expectations from the women, for example, *'wanting to deliver on their outstations'*.

Choice

People believed in enabling women to make an informed choice. They also thought women should have the choice to go to either Nhulunbuy or Darwin without having to pay extra if they choose

Darwin. Women said they *'don't like going to town as they get too worried for their families and miss them too much'*.

Escorts

Everyone felt that all primiparous women should have an escort. Multiparous women should have one if they have any special problems. This may include problems with young children who are better to stay with their mother than be left in the community. Any one whose comprehension of English is poor should have an escort. There are *'too many problems with women not getting the real story from the doctors, they need to employ Aboriginal workers or interpreters, or allow more escorts'*.

Hostels

Women said they would like to be able to choose to stay in the hospital rather than the hostel as it would be safer, *'too much humbug from drunks in Gove'*. When in Darwin they said that they felt all of the hostels should provide food for the women.

Positions in Labour

Women said that in hospital they *'should be able to squat on a mat on the floor for the birth, no-one likes the shame of lying on their backs and spreading their legs'*.

Birthing in Galiwin'ku

Women felt it would be safe to deliver on the island now that there are nurses there. They do not like to go away for the birth as *'there are too many unfamiliar faces and you get too homesick'*. They thought that the primiparous women and the younger girls who were scared would still like to go to town, whereas the older women would probably like to stay in the community. They felt birthing must occur in a place where it is safe and away from the men, as women are not allowed to let men hear them scream or cry. The staff felt that community birthing could improve antenatal care but a community education campaign would be necessary first. They thought they would need to have a contract with the woman involved and it should only be available to women who have had antenatal care and are healthy with no risk factors.

A Birth Centre in Darwin or Nhulunbuy

Women felt this would be a homely place to deliver. They felt it could be for both Aboriginal and non-Aboriginal women but would need separate rooms. They thought it would be appropriate for non-Aboriginal men to go there if their partners wanted them to, but thought that Aboriginal men would probably not go there.

Additional Comments from the Health Staff

There was strong support for the health workers to be able to train in midwifery, as *'they are the ones that will always live on the community'*. The health workers felt that there should be a post graduate training course, more detailed than the James Cook course, but *'it is no good if you have to be a nurse first'*. The staff thought there was potential to save money from the PATS budget: women would not have to be flown out and accommodated in regional centres; savings could come from those who are presently flown out and return to the community of their own accord, often getting flown out by Air Medical transport when in labour; as presently some women do not turn up for their flight at the last minute the airlines will often charge regardless.

The midwives also suggested that staff would need regular educational updates, and inservices and they should be trained to do ultrasound scans. The doctor said that she would need to increase her insurance cover for procedural obstetrics, which would mean an increase cost of approximately \$6,000 per annum.

Additional Comments from the Women

Women, particularly the older ones, said they should bring back the old ways, like smoking the babies and mothers post following the birth. *'Instead of using the light for healing the perineum in hospital they would be better to use smoking, not so much shame involved and they wouldn't feel so vulnerable'*. Some of the younger women said they felt *'better going to a non-Aboriginal woman for their checkups as they are too shy to see the health workers from their community'*.

Feasibility of Birthing

Galiwin'ku are having an average of seven unplanned births a year in the community. Some of the women are not attending for antenatal care and this could be because they do not want to be sent away to deliver their babies. It is possible that antenatal care may be increased if women were given the option to deliver on the island. Women were adamant that they should still have the choice to deliver in town if they wanted to, and felt the younger girls may prefer to continue to do this. Staff did not seem particularly interested in pursuing community birthing which may have been because they felt their priorities lay elsewhere at the time. They suggested they would only be interested if it was to be resourced adequately. If pilot projects were to occur, Galiwin'ku would need to be considered as a potential community for the project and it may have the added benefit of improving antenatal care.

MILINGIMBI COMMUNITY REPORT***Community Overview***

Milingimbi community is on an island approximately half a kilometre from the mainland, 440 km east of Darwin and 206 km west of Nhulunbuy. It has an all weather strip with lights that need to be switched on by someone on the ground. Flying time to Darwin is one hour and ten minutes with Air North who provide a daily service. It is a 40 minute flight to Nhulunbuy and there is a daily flight Monday to Saturday. The population of the island is approximately 900 although this increases at ceremony time. They have an average of 18 births from the community each year. There are several outstations, two of which are populated all year and are serviced by the health centre.

Milingimbi was initially established as a Methodist mission in 1923. There are four languages spoken in the area, including English. The community is administered by a local council and the CDEP program is running in the community, though managed separately. There is one store and they also run the take-away. The Territory Credit Union has an outlet and the store now offers an EFTPOS facility. The town has a pre school, a primary school, and a post primary school. The Strong Women, Strong Baby, Strong Culture program is operating in the community. The women's resource centre is closed at the moment and there are no meals being cooked for the elderly. There is no facility for aged care in the community. There is no alcohol allowed in Milingimbi and they do not have any resident police officers.

The health centre is a Territory Health Service that is open Monday to Friday from 8.00-5.00. Staffing levels include two nurses (both midwives), eight health workers (six female and two male - one a trainee) and a doctor who visits for two days a week. The health centre does not have a generator and the phones can go down in the wet season. They had a recent incident where fluctuating power throughout the health centre meant that a man who was having a heart attack and was connected to several monitors and machines needed to be moved into another room that did seem to have power. The trolley couldn't fit through the door and he had to get up and walk some of the way. The air conditioning was not operating and staff, who were sweating profusely, felt they were participating in a Monty Python skit, rather than working in a health centre.

The health centre has a separate women's room that is equipped with an obstetric bed, overhead lights, a fetal doppler machine, and infant and adult intubation equipment. Other equipment includes an ultrasound machine, an IVAC machine, ECG machine, defibrillator, suction, oxygen, an oxiviva and an oximeter. They do not have an overhead heater, a thermo-regulated portocot or a headbox.

Antenatal care is performed by the midwife and antenatal education is given on a one to one basis. Women can go to either Darwin or Nhulunbuy to deliver their baby but if they choose Darwin they must pay the fare one way. Statistics were taken from the birth book and the Epidemiology branch but they are not complete. They suggest a mean annual birth rate of 18, with an average of 2-3 (14.8%) being born on the community each year.

Table 9. Number of births to women from the community and the number and percent of births in Milingimbi for the years 1990-98.

	1991	1992	1993	1994	1995	1996	1997	1998
Births to women from Milingimbi	27	10	7	34	7	26	14	18
Births in Milingimbi	5 18.5%	1 10%	1 14.2%	?	?	1 3.8%	3 21.4%	5 27.7%

Summary of Consultation

Three days were spent in Milingimbi and two women were hired as facilitators, Judy Liririnyin and Dorothy Muwalkmuwuy. Meetings were held spontaneously in the different camps, on the beach, in the council office and outside the shop. A total of 45 people were consulted, 36 women, three nurses, four healthworkers and two men. Meetings were held in both English and the local language and the facilitators interpreted for the interviewer.

General Themes and Alternative Suggestions

Safety

The staff said they would be happy to assist women to birth in the community if: there were at least two midwives in the community; minimum standards applied; and it was only available to low risk women. They said they would need to keep current with their skills and this would have to be supported by THS. Everyone thought that *'high risk women should deliver in town'* and some staff were worried that *'if something went wrong the staff could get blamed'*. There could be problems if there was an emergency, *'yesterday it took two hours for a priority one plane to get here'*. *'Although we are already prepared for birthing emergencies so we would not need much more equipment'*.

Choice

Women should be able to choose to deliver in Darwin without having to pay extra. They felt it would be good if they could deliver in their own community.

Escorts and Support in Labour

A major concern is that women having their first baby should have an escort. *'They do not know when to push and need someone who can explain all this in their own language'*. *'There should be more Aboriginal people working in the hospital, in particular a health worker in the birthing unit'*.

Hostels

Women said that there is *'too much humbug for the young women in Nhulunbuy but if they go to Ebirra in Darwin then they do not get food!'*. *'There should be a self care unit in Nhulunbuy as the young girls like to stay at the hospital'*. Recently a high risk antenatal women said she would only go to Nhulunbuy for birthing if she could stay at the hospital, as she was too frightened to stay at the hostel. Staff approached the maternity ward nursing staff who were happy for this but needed authority from the medical staff. The District Medical Officer said that this was not appropriate and staff then referred to the Medical Superintendent who refused, saying that they would send the medical plane for her when she went into labour. It was not until there was intervention from the Rural Director of Nursing that this decision was reversed.

A Birth Centre in Darwin

It would be good to have a birthing centre with all women together, especially if it had a hostel attached to it.

Additional Comments from the Health Staff

'We need to get better dating for women so we can decrease their time away from the community'. 'We have an ultrasound machine here but no-one knows how to use it, we should be able to go into town to learn simple ultrasonography'. Many thought that community birthing might increase early antenatal care. They were concerned that community birthing would not work well when there were problems with staff, especially if they were relying on short term relievers. The health workers felt they would like to get involved in birthing again but would like to have a midwife beside them for deliveries.

Additional Comments from the Women

Women said that girls are falling pregnant at a much younger age than they used to, but they were not sure why this was occurring. They identified two of the biggest problems for women in town: one was not having enough money and the other was worrying about their kids at home. They also felt that *'Balanda have put pressure on us to deliver their way in hospital, but we should be doing it our way, in tune with the environment'*. They said *'it is O.K. being born in the hospital, we still retain our links to the land, but it would be better to birth here in the community'*.

Feasibility of Birthing

There was a moderate amount of interest for birthing in this community. The women felt it would be good to have the choice and would mean birthing was not such a drain on the family unit. Many people felt it could improve antenatal care. The staff were supportive of the idea if it was for low risk women, resourced adequately, and minimum standards were followed. They would need a generator for emergency power in the wet season and a thermo-regulated portacot, but both of these should be available at the health centre anyway. This community could be considered as a potential place for a pilot project although staffing levels are not adequate at present.

KATHERINE DISTRICT- REGIONAL CENTRE

Overview

Katherine District has a population of approximately 19,000 (around 10,000 are in Katherine itself) and is the regional centre for 19 Community Health Centres. Katherine hospital is a 60 bed hospital with a 14 bed maternity unit and a three bed birthing unit. They have approximately 360 deliveries a year. There is a high turnover of medical staff at the hospital and they have various amounts of post graduate obstetric experience. Some have had none and others have their Diploma of Obstetrics and Gynaecology. Several of the General Practitioners in town have their Diploma of Obstetrics and Gynaecology and are providers of antenatal, intrapartum and postnatal care. They are able to provide continuity of care and many have been resident in Katherine for some time, one for 28 years.

The Aboriginal Medical Association in Katherine is called Wurli Wurlinjang and they provide the antenatal and post natal service to most of the Aboriginal women who live in town. When remote women come in to await the birth they stay at a hostel that is owned by the Aboriginal Hostels Association. It is a comfortable, secure building on hospital grounds, provides three meals a day and seems to be popular with the women.

A midwives' clinic also provides antenatal care and education for the women in town, and for the women from remote areas who have come to town to await their birth. Suggestions to create a shared care model (between the midwives and general practitioners including Wurli Wurlinjang) have been made, but the logistics of it are thought to be very difficult. This would be in line with Recommendation 5.3 from the NHMRC report 'Options for Effective Care in Pregnancy' which is: 'Shared care involving small teams of general practitioner obstetricians and midwives should be encouraged. This should promote satisfaction for both the woman and the service providers'.⁵⁸

⁵⁸ NHMRC, 1996, *Options For Effective Care In Childbirth*, AGPS, Canberra.

Summary of Consultation

Katherine was visited for a three day period and discussions were held with the Director of Nursing at the hospital, the rural Director of Nursing, the midwives at the hospital, the Aboriginal Liaison Officer, several remote area nurses, staff from Wurli Wurlinjang, and the hostel. Unfortunately meetings with the Air Medical Staff and the District Medical Officers did not occur, as they were unavailable at the time of the visit.

Binjari is a small community that is accessed by a sealed road half an hour north west of Katherine. Women from Binjari had been to the Danila Dilba Women's Business Meeting in November and had returned to talk to community women about birthing issues. A small meeting with six women occurred at Binjari and the community women's responses were summarised. They have been included in the general themes below.

Two communities with the highest birth rate in the district were chosen to be in the original review, Ngukurr community and Borroloola. The report from Ngukurr community follows in a separate section.

Borroloola

Borroloola and surrounding districts have a population of around 1,800-2,000 including tourists, and cater to many more in the dry season (at times up to 3,000). It was suggested that it is slowly becoming a regional centre and staffing and infrastructure is not sufficient for delivering current services, let alone any form of expansion. They have an average of 40-50 births each year with around 5-7 (13%) being born in the community.

Following phone conversations with the health centre it was decided that it was not a good time to visit the community to talk about birthing. They had had a very bad year and major concerns revolved around alcohol abuse and the effect it was having on the town. The health staff held conversations with some of the elders who gave their opinion on remote area birthing. Generally they felt that too many of the women were in a high risk category and they would prefer that they delivered in a safer place, even though the women themselves would probably like to stay in

Borroloola. Their major concerns were that alcohol and poor dietary and living conditions were eroding their culture.

General Themes and Alternative Suggestions

Safety

Many people believed that there were too many problems with delivering on communities in the Katherine Region,. A lot of the airstrips are closed in the wet season, and can be closed for several days (the only communities with all weather access are Borroloola and Ngukurr; the Lajamanu strip is usually open but the weather is often too bad for planes to land). Also many of the pregnant women have medical complications that put them into a high risk category. One remote area nurse felt that it should not be contemplated unless it was resourced adequately, including blood that is available for transfusions on the community. She also thought that if it was started then all women would probably want to stay in their communities for birthing. Others believed that there will always be people who have extreme views on the matter and the only way to be sure would be to do a pilot project.

Health Workers

People believed that there should be an Aboriginal Health Worker working in the hospital, especially in the maternity section. Many of the staff were unsure of the role of the health worker in hospitals. They felt there should be distinct job descriptions and their positions should be covered by law (RDH has been developing these). Health workers have said that they need to have a Post Graduate Diploma in Midwifery, but at the moment it is not available anywhere.

Summary

It was widely reported that Katherine Hospital had a very friendly atmosphere. It is ground level and the maternity section has access to lovely gardens. The birthing units have been decorated well and are very homely, although they suggested they would like some more Aboriginal artwork for the walls. The staff practice active birthing, encouraging the women to try different positions for labour and the birth. The hostel is a secure place on hospital grounds and provides three meals a day. The women seem comfortable here, though they complain of boredom and missing family.

The services in Katherine seem to be the best of all the regions and this could be the reason that women seem to be less interested in delivering in their communities.

KATHERINE DISTRICT- COMMUNITIES

NGUKURR COMMUNITY REPORT

Community Overview

Ngukurr Community can be found 320 km south east of Katherine on the banks of the Roper River. There is road access to Katherine in the dry season and the trip takes approximately three to four hours. The flying time from Ngukurr to Katherine is 40 minutes in a King Air and the strip is bitumen with recently installed automatic lights. Flights to the community are on Monday, Wednesday and Friday with the Skyport mail plane. Medical evacuations are performed by the Air Medical Service.

The community was founded by the missionaries in 1906 and today has a population of approximately 900. They have an average of 35 births a year. There are seven outstations, 19 clan groups and seven Aboriginal language groups in the area. English is spoken by some of the community. The community is administered by a local council and the CDEP program is operating. There are four stores and a takeaway in the town. There is no alcohol allowed in the community but in the dry season people can drive to Roper Bar (half to one hour's trip) where they can buy take away alcohol and bring it back to the edge of the community. There is a women's centre and the Strong Women Program is operating in the community. There is no facility for aged care. They have a child care centre and a library and there are two Territory Police with one Aboriginal Community Police Officer. There is a primary school in town and another at one of the outstations.

The health centre is a Territory Health Service and there is a local Health Committee. They are staffed with two nurses (one is a midwife at present) and six health workers (three male and three female). A doctor visits the community for three days a fortnight. Health concerns that were identified by the community were marijuana abuse, domestic violence, women's screening and petrol sniffing. The health centre is in a good state of repair but does not have a generator. Last year they had to borrow one from the council for a few days so they could continue to operate.

The health centre has a women's health room that is equipped for emergency deliveries. They have both adult and neonatal intubation equipment and an ECG machine. Other equipment includes a

thermo-regulated portacot, a doppler machine, stirrups, forceps, a battery operated light, overhead lights, and an obstetric bed. They do not have an IVAC machine, overhead heater, defibrillator, ultrasound machine, vacuum extractor or headbox. Antenatal care is performed by the midwife in the community and education is on a one to one basis. Most women go to Katherine to have their babies. There are an average of 35 births a year from the community and approximately two per year (6%) in the community.

Table 10. Number of births to women from the community and the number and percent of births in Ngukurr for the years 1990-98

	1990	1991	1992	1993	1994	1995	1996	1997	1998
Births to women from Ngukurr	33	31	29	30	36	39	28	50	22
Births in the community	3 9.1%	3 9.7%	1 3.4%	1 3.3%	1 2.8%	2 5.1%	0 0	4 8%	3 13.6%

Summary of Consultation

A three day trip was organised to this community and two of the Strong Women Workers acted as facilitators, Helen Porto and Marjorie Dingal. Meetings were held outside the shop, the council and in the women's centre. A total of 25 people were consulted including one nurse, two health workers and several of the community elders.

General Themes and Alternative Suggestions

Safety

No-one wanted to compromise safety.

Escorts and Support in Labour

Women felt that all primiparous women and all young girls (under twenty years) should be allowed to have an escort, but it is not so important for multiparous women. Some women like to take their youngest children with them which means they need an escort to look after them. Women wanted to know why some communities are always allowed an escort when others are not. They felt the rule

should be the same for all communities. They also felt that anyone who has to go to Darwin because of their risk status should have an escort, as *'they get very frightened there'*.

Women felt that the main reason women run away is because they are scared. If they were allowed to have an escort this would be less likely to occur. They felt *'the young girls needed someone to translate for them, it should be someone who has been through it before'*. Other women suggested that there should be a grandmother working in the birthing units of each hospital. Many commented that *'they have a good liaison officer working in Katherine'*.

Hostels

Women like the antenatal hostel that is attached to Katherine hospital as it is secure, has three meals a day and *'there are no drunks and the food is good'*.

Boredom

This was identified as a major problem for the women when they go into town. Suggestions were made for activities that could be organised. These included a painting and sewing room, educational sessions, barbeques where they could go swimming and videos on labour and birthing (videos are shown to the women when they visit the maternity section).

Additional Comments from the Health Staff

'Most women are happy to go to Katherine to deliver but they can get lonely and run away'. *'They are often in there for too long and this can be because we do not have reliable ultrasound scans for dating'*. The staff felt that the Traditional Land Owners seem to like their children to be born on the land but they were worried that staff could be blamed if there were problems with the birth.

Additional Comments from the Women

Generally people felt that women get sent in too early and get bored in town and thought it would be good if normal multiparous women could have their babies in the community. They thought that the Strong Women Workers should be doing classes with the young girls and suggested that there was

'not much cultural business anymore... not even the smoking ceremony'. Women talked about the cultural problem when babies are born on someone else's land, although they feel the community is adapting to this. *'They should really belong to where they have been delivered but the father of the baby is the strongest link to the land and people are concentrating on this'*.

One other problem that was mentioned was that *'the doctors that come to the community change over too much'*. They said it would be better to have continuity and people would be able to get used to them and start to trust them.

Feasibility of Birthing

Although there was some interest in community birthing, particularly from the older women, this community does not have the resources or staffing levels to be able to offer such a service in a safe environment. Having only one midwife in the community and no local doctor would mean that emergency situations could be putting the mother and baby in an unnecessary 'at risk' situation. Women felt that services in Katherine should be improved for the antenatal women. The staff felt that there were other priorities that needed to be addressed prior to community birthing. Given present resources this community is not appropriate as a pilot site for community birthing.

APPENDIX

GLOSSARY

Antenatal - Refers to the period of time from conception to birth.

Apgar score - A numerical scoring system routinely administered at one and five minutes after birth to evaluate the condition of the baby. The score ranges from 0-10 (10 is the optimal).

Balanda - A word used by many Aboriginal people in the Top End to describe non-Aboriginal people.

Birthing Centre - A place with a homelike environment where women are able to receive antenatal, intrapartum and postnatal care by midwives and doctors. These centres can be connected to traditional birthing units or may be free standing.

Grand Multiparous Women - A woman who has had five or more births.

High Risk - A person who is considered to have complications that may interfere with the normal course of pregnancy and birth.

Humbug - A term used to describe a nuisance, an irritation or a bother.

Intervention - A clinical procedure in pregnancy or labour that interferes with the normal course of events, eg. artificial rupture of membranes, induction of labour, delivery by forceps or caesarean.

Intrapartum - Refers to the period of time that a woman is in labour.

Intubated - When a tube is passed via the nose or mouth into the lungs to enable the direct delivery of oxygen. The tube is usually connected to a pump (either mechanical or manual) that can take over the role of breathing.

Low Birth Weight - A baby that is born and weighs less than 2,500 grams.

Morbidity - Illness or disease.

Mortality - Death.

Multiparous / Multipara - A woman who has previously birthed a viable infant.

Neonatal - Refers to the first 28 days following birth.

Oxytocin - A drug that is used to stimulate the uterus to contract, often used to induce labour.

Perinatal - From 20 weeks gestation to 28 days after birth.

Postnatal / Puerperal / Puerperium- Refers to the first six weeks following birth.

Premature - An infant born before 37 completed weeks gestation.

Primiparous / Primipara - A woman having her first pregnancy.

Stillbirth - A baby born dead after 20 weeks gestation or weighing more than 400 grams (Australian definition).

Strong Women Workers - Community based workers employed by local councils (THS funded) to promote and help in achievement of the health of pregnant Aboriginal women and their babies.

Traditional Birthing Attendant - An Aboriginal woman who is recognised by the Aboriginal community as someone who provides care to women in labour.

Viable Birth - A baby that is born following 20 weeks gestation or weighing more than 400 grams.

Women's Centre - A place for women that operates in various forms in different communities. May be a social gathering place, a safe place, an arts and crafts centre, may provide child care or a meals on wheels service, etc.

Women's Shelter - A designated safe place for women to go if they are feeling threatened.

Table 11. A list of the equipment available on each of the communities that were visited.

Equipment	Maningrida	Nguiu	Pirlangimpi	Milikapiti	Wadey	Galawin'ku	Milingimbi	Ngukurr
Sealed Airstrip	√	√	x	√	√	√	√	√
Pilot controlled auto lights	√	√	√	*	*	√	*	√
Generator	√	√	x	x	√	√	x	x
Donpler	√	√	x	√	√	√	√	√
Overhead Heater	x	x	x	x	x	x	x	x
Portacot	√	√	x	x	√	x	x	√
IVAC machine	x	x	x	x	√	x	√	x
Appropriate lighting	√	√	√	x	#	√	√	√
Appropriate bed	√	√	√	√	√	√	√	√
Adult intubation	√	√	√	?	√	√	√	√
Neonatal intubation	√	√	√	?	√	√	√	√
Headbox	x	x	x	x	x	x	x	x
Stirrups	√	√	x	?	√	√	√	√
Air Conditioned	√	√	x	√	√	√	√	√
Steriliser**	√	√	√	√	√	√	√	√
Vacuum extractor	x	x	x	x	x	x	x	x
Forcens	√	√	x	x	√	x	x	√
Ultrasound machine	x	x	x	x	x	√	√	x
Oximeter	√	√	√	?	?	√	√	x
EKG machine	√	√	√	?	√	√	√	√
Defibrillator	x	√	x	x	√	√	√	x

* Emergency lighting can be activated manually on the ground.

** Most health centres have dental sterilisers that they use for limited small equipment and otherwise they send equipment into the regional centre for sterilising

Portable light available but no lighting or power in the women's room in a power failure.

Table 12. Compilation table showing: the number of births in each of the communities; the total number of births from these communities; the percent that are birthing in each of the communities and the final column shows the average of these figures over the years 1990-1998.

	1990	1991	1992	1993	1994	1995	1996	1997	1998	Average
Maningrida	11/74 15%	6/66 9%	12/57 21%	13/72 18%	10/66 15%	7/68 10%	9/63 14%	4/42 9.5%	7/42 16%	9/64 14%
Nguiu	1/31 3.2%	2/20 10%	2/31 6.4%	1/27 3.7%	4/35 11.4%	1/35 2.8%	1/25 4%	4/31 13%	3/33 9%	2/30 7%
Wadeye	3/52 5.8%	8/56 14.3%	3/51 5.9%	7/55 12.7%	2/49 4.1%	6/57 10.5%	6/50 12%	3/39 7.7%	1/33 3%	4/49 8.4%
Galawin'ku	8/46 17%	9/56 16%	3/50 6%	6/50 12%	5/39 13%	3/50 6%	14/72 19%	5/47 11%	10/63 16%	7/53 13%
Millingimbi		5/27 18.5%	1/10 10%	1/7 14.2%	?/34	?/7	1/26 3.8%	3/14 21.4%	8/15 27.7%	2.5/18 14.8%
Ngukurr	3/33 9.1%	3/31 9.7%	1/29 3.4%	1/30 3.3%	1/36 2.8%	2/39 5.1%	0/28	4/50 8%	3/22 13.6%	2/35 6%