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Factors affecting the quality of antenatal care provided to remote dwelling Aboriginal women in northern Australia

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ABSTRACT

Objective: there is a significant gap in pregnancy and birth outcomes for Australian Aboriginal and Torres Strait Islander women compared with other Australian women. The provision of appropriate and high quality antenatal care is one way of reducing these disparities. The aim of this study was to assess adherence to antenatal guidelines by clinicians and identify factors affecting the quality of antenatal care delivery to remote dwelling Aboriginal women.

Setting and design: a mixed method study drew data from 27 semi-structured interviews with clinicians and a retrospective cohort study of Aboriginal women from two remote communities in Northern Australia, who gave birth from 2004–2006 ($n=412$). Medical records from remote health centres and the regional hospital were audited.

Measurements and findings: the majority of women attended antenatal care and adherence to some routine antenatal screening guidelines was high. There was poor adherence to local guidelines for follow-up of highly prevalent problems including anaemia, smoking, urinary tract infections and sexually transmitted infections. Multiple factors influenced the quality of antenatal care.

Key conclusions and implications for practice: the resourcing and organisation of health services and the beliefs, attitudes and practices of clinicians were the major factors affecting the quality of care. There is an urgent need to address the identified issues in order to achieve equity in women's access to high quality antenatal care with the aim of closing the gap in maternal and neonatal health outcomes.

Introduction

In Australia, Aboriginal and Torres Strait Islander women represent 4% (11,792) of all women who give birth (294,814) (Li et al., 2012). Fifty two per cent of these women live in outer regional and remote areas (Laws et al., 2010). Compared with non-Aboriginal women, there is a significant difference in pregnancy and birth outcomes. Teenage pregnancy, smoking in pregnancy, gestational diabetes and hypertensive disorders are more prevalent (Prime Minister's Science, Engineering and Innovation Council (PMSEIC), 2008) and the maternal mortality ratio is more than two and a half times higher among Aboriginal women and known to be underestimated (Kildea, 2008). The perinatal death rate is twice as high for Aboriginal infants relative to other non-Indigenous infants (17.3 per 1000 birth versus 9.7), as is preterm birth (13.3% versus 8.0%) and low birth weight (12.4% versus 5.9%) (Laws et al., 2010).

A complex range of factors contributes to these disparities. These factors include less access to culturally secure health services, sustained institutional racism, lower educational attainment and poverty, a higher burden of disease that commences early in life and the continuing effects of colonisation (Aboriginal and Torres Strait Islander Social Justice Commissioner, 2005; Kildea et al., 2010).

Antenatal care (ANC) provides an opportunity to improve the health of the mother and her infant (Carroli et al., 2001). In Australian Aboriginal communities numerous factors have been identified to improve ANC attendance, care provision and birth outcomes. These include: continuity of carer, an appropriately skilled workforce, integration with other services (such as the hospital), outreach activities, flexibility in care delivery and respect for culture and family involvement in health issues and community based or

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community controlled services whereby people in the Aboriginal community initiate and operate health care services to deliver comprehensive and culturally appropriate services to their own community members (Eades, 2004; Herceg, 2005; Johnston and Coory, 2005; Wilson, 2009; National Aboriginal Community Controlled Health Organisation (NACCHO), 2012).

Across the country ANC is typically provided by midwives and doctors, not all of whom have obstetric qualifications. In rural and remote areas registered nurses who do not necessarily have midwifery skills also provide this care (Kildea et al., 2010). There is a known shortage of registered nurses with midwifery and child health qualifications in remote Australia. In these settings the number of registered nurses with these qualifications declined from 65% and 18% respectively in 1995 to 29% and 11% in 2008 (Lenthall et al., 2011). Retention of staff in remote areas is also difficult (Weymouth et al., 2007).

Aboriginal women commence antenatal care later during pregnancy and have fewer visits compared with non-Indigenous women (Rumbold et al., 2011; SCRGSP, 2011). Utilisation of ANC itself does not always ensure quality of service provision. There is limited data regarding the quality of ANC delivered to remote dwelling Aboriginal women (Hunt, 2003; Rumbold et al., 2011; SCRGSP, 2011) and the factors that influence the delivery of this care.

The data presented here is from a baseline study nested within the '1+1=A Healthy Start to Life' project which aimed to improve maternal and infant health for remote dwelling Aboriginal families in the Top End of the Northern Territory (NT). It used a participatory approach to a mixed-methods design with baseline data informing interventions. The project was developed in response to long standing concerns voiced by Aboriginal women, policy makers and health providers about the quality of maternity services and culturally unsafe practices (Department of Health and Community Services, 1992; Kildea, 1999, 2005; Barclay and Kildea, 2006; Kruske et al., 2006). Here we describe the quality of ANC delivery, the service gaps and barriers to care.

Methods

Setting

The study sites were the Health Centres (HCs) in two of the largest remote Aboriginal communities (population 2200–2600) in the tropical Top End of Australia's NT, located approximately 500 km from the regional centre, Darwin. The third study site, the regional hospital in Darwin is the main public hospital servicing these communities and provides tertiary level care including maternity, newborn and paediatric care.

Antenatal care in these remote communities is generally provided at government HCs by core local staff and includes clinical support from visiting specialists. The Women's Business Manual (WBM) (Congress Alukura and Nganampa Health Council Inc., 1999) provides standard screening and management guidelines for ANC and is used by clinicians working in these settings. More complex pregnancy care and specialist tests are managed at the regional hospital. Women are generally transferred to the regional centre at 36–38 weeks gestation where they have the remainder of their ANC and give birth in hospital (Banscott Health Consulting, 2007).

Following community consultation and endorsement, approval was obtained from the NT Department of Health and Families (DHF), local health boards and Community Councils and the Human Research Ethics Committee of the Menzies School of Health Research. Written consent was obtained from interview participants prior to interviews.

Design

A mixed method design (Creswell and Plano Clark, 2007) was used in this study. Qualitative and quantitative data were collected and analysed to inform health service improvements and report the views of the range of staff involved in the provision of ANC within the HCs and hospital. Data collection occurred from January to August 2008.

Retrospective cohort study

We conducted a retrospective cohort study of Aboriginal mothers from these two communities who gave birth from 2004 to 2006. All Aboriginal women who gave birth to an infant at the regional hospital, in hostel accommodation, in transit to regional hospital or in the remote community from 1st January 2004 to 31st December 2006 with gestation of at least 20 weeks or birth weight of at least 400 g, were eligible for inclusion in the study.

The study cohort was constructed through manual data linkage between community birth records from the HCs and medical records at the regional hospital. Four hundred and twenty women were identified as eligible for the study. Eight women had no available record at either the hospital or HC. The final cohort consisted of 412 women.

Quality of antenatal health care delivery was assessed using manual review of medical records at the hospital ($n=412$) and HCs ($n=399$). All women should have their antenatal medical records copied and transferred from the remote health centre to the regional hospital but at times this did not occur.

The main outcome measures included attendance at ANC and the adherence to recommended WBM antenatal guidelines (3rd edition) (Congress Alukura and Nganampa Health Council Inc., 1999) for routine antenatal care, screening tests and follow up of identified health conditions. Adherence to selected guidelines for smoking in pregnancy, genetic screening for fetal anomalies, anaemia, sexually transmitted infections (STIs), urinary tract infections (UTIs) and Group B streptococcus (GBS) were examined in detail given the high prevalence of these conditions among Aboriginal women and good evidence that exists for their screening and treatment during pregnancy.

Interview data

The first author conducted 27 semi-structured interviews with key clinicians involved in the provision of ANC in the HCs ($n=19$) and at the hospital (n=8) (Table 1). Purposive sampling was used to identify and recruit the first 19 participants. Snowball sampling was used to recruit the remaining participants, as we required

Table 1
Interview participants.

Location	Health staff ($n=27$)
HC 1 ($n=10$)	District Medical Officers ($n=2$) Remote area nurses ($n=2$) Midwives ($n=3$) Aboriginal health worker ($n=1$) Clinical service managers ($n=2$)
HC 2 ($n=9$)	District Medical Officers ($n=2$) Remote area nurses ($n=2$) Midwives ($n=2$) Aboriginal health workers ($n=1$) Clinical service managers ($n=2$)
Regional hospital ($n=8$)	Outreach (visiting) midwives ($n=4$) Obstetric doctors ($n=2$) Clinical service managers ($n=2$)