

Evidence evaluation report — Models for Aboriginal and Torres Strait Islander women's antenatal care

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Research question

How can holistic antenatal care be provided to meet the needs of Aboriginal and Torres Strait Islander women including spiritual, emotional, social, and cultural, as well as physical and healthcare needs?

Evidence summary

A narrative review of studies was undertaken for this topic rather than a systematic evaluation of the evidence.

Background information

Many Aboriginal and Torres Strait Islander women experience healthy pregnancies. The women having babies are generally younger and, on average, have more children during their reproductive life than non-Indigenous women (Clarke & Boyle 2014). Aboriginal culture has many strengths that can provide a positive influence, such as a supportive extended family network and kinship, connection to country, and active cultural practices in language, art and music. It informs a more holistic view of wellbeing.

For women who experience adverse events in their pregnancies, the reasons are diverse and occur throughout the life course (Clarke & Boyle 2014):

- *socioeconomic factors* — lower income, higher unemployment, lower educational levels, inadequate infrastructure (eg housing, water supply), increased rates of incarceration
- *poor health* — diabetes mellitus, cardiovascular disease, respiratory disease, kidney disease, communicable diseases, injuries, poor mental health, overweight and underweight
- *lifestyle factors* — lack of physical activity, poor nutrition, harmful levels of alcohol intake, smoking, higher psychosocial stressors (deaths in families, violence, serious illness, financial pressures, contact with the justice system).

Successful models of care

A number of programs have been implemented around the country to improve the delivery of antenatal services to Aboriginal and Torres Strait Islander women. Evaluations have shown their success in improving uptake of care earlier in the pregnancies, for the duration of the pregnancy and often postnatally, which allows other opportunistic healthcare interventions, such as family planning, cervical screening and improving breastfeeding rates (Clarke & Boyle 2014). This shows that if services cater for their needs, women will utilise them.

This review identified evidence of positive outcomes from the following programs.

- *Aboriginal Maternity Group Practice Program (AMGPP)* — The AMGPP employed Aboriginal grandmothers, Aboriginal Health Officers and midwives working in partnership with existing antenatal services to provide care for pregnant Aboriginal women residing in south metropolitan Perth (Bertilone & McEvoy 2015). Babies born to AMGPP participants were significantly less likely to be born preterm (9.1% vs 15.9% in historical controls [aOR 0.56; 95%CI 0.35 to 0.92]; vs 15.3% in contemporary controls [aOR 0.75; 95%CI 0.58 to 0.95]); to require resuscitation at birth (17.8% vs 24.4% in historical controls [aOR 0.68; 95%CI 0.47 to 0.98]; vs 31.2% in contemporary controls [aOR 0.71; 95%CI 0.60 to 0.85]) or to have a hospital length of stay >5 days (4.0% vs 11.3% in historical controls [aOR 0.34; 95%CI 0.18 to 0.64]; vs 11.6% in contemporary controls [aOR 0.56; 95%CI 0.41 to 0.77]) (Bertilone & McEvoy 2015).

Analysis of qualitative data from surveys and interviews found that the model had a positive impact on the level of culturally appropriate care provided by other health service staff, particularly in hospitals. Two-way learning was a feature. Providing transport, team home visits and employing Aboriginal staff improved access to care. Grandmothers successfully brought young pregnant women into the program through their community networks, and were able to positively influence healthy lifestyle behaviours for women (Bertilone et al 2016).

- *Aboriginal Family Birthing Program (AFBP)* — The AFBP provides culturally competent antenatal, intrapartum and early postnatal care for Aboriginal families across South Australia, with women cared for by a midwife and an Aboriginal Maternal and Infant Care worker. Compared with women attending mainstream public antenatal care, women attending metropolitan and regional AFBP services were more likely to report positive experiences of pregnancy care (adjOR 3.4, 95%CI 1.6 to 7.0 and adjOR 2.4, 95%CI 1.4 to 4.3], respectively). Women attending Aboriginal Health Services were also more likely to report positive experiences of care (adjOR 3.5, 95%CI 1.3 to 9.4]) (Brown et al 2015). Even with greater social disadvantage and higher clinical complexity, pregnancy outcomes were similar for AFBP and Aboriginal women attending other services (Middleton et al 2017).
- *Aboriginal Maternal and Infant Health Service (AMIHS)* — the AMIHS was established in NSW to improve the health of Aboriginal women during pregnancy and decrease perinatal morbidity and mortality for Aboriginal babies (Murphy & Best 2012). The AMIHS is delivered through a continuity-of-care model, where midwives and Aboriginal Health Workers collaborate to provide a high-quality maternity service that is culturally sensitive, women-centred, based on primary health-care principles and provided in partnership with Aboriginal people. An evaluation of the AMIHS found:
 - the proportion of women who attended their first antenatal visit before 20 weeks increased (65 vs 78% in 2004, OR 1.2; 95%CI 1.01 to 1.4; p.0.03)
 - the rate of low birthweight babies decreased (13 vs 12%, not statistically significant)
 - the proportion of preterm births decreased (20 vs 11%; OR 0.5 95%CI 0.4–0.8–1.4; p=0.001)
 - perinatal mortality decreased from 20.4 per 1,000 births in 1996–2000 to 14.4 per 1,000 births in 2001–2003 in Local Government Areas where AMIHS was located (not statistically significant owing to small numbers)
 - breastfeeding rates improved from 67% initiating breastfeeding and 59% still breastfeeding at 6 weeks in 2003, to 70% initiating breastfeeding and 62% still breastfeeding at 6 weeks in 2004.
- *Midwifery group practice* — A midwifery group practice (staffed by midwives, Aboriginal Health Workers, Aboriginal midwifery students and an Aboriginal 'senior woman') was introduced in a regional centre in the Northern Territory to provide continuity of care for women from remote communities transferred to the centre for antenatal care and birth (Barclay et al 2014). There were improvements in antenatal care (fewer women had no antenatal care and more had more than five visits), antenatal screening and smoking cessation advice and a reduction in fetal distress in labour. The experiences of women, midwives and others during the establishment and the first year of the midwifery group practice were also reported positively and women's engagement with the health services through their midwives improved. Cost-effective improvements were made to the acceptability, quality and outcomes of maternity care.
- *Midwifery continuity of care* — A meta-synthesis of qualitative studies undertaken in Australia and Canada found that overall the experience of midwifery services was valuable for Indigenous women, with improved cultural safety, experiences and outcomes in relation to pregnancy and birth (Corcoran et al 2017). The most positive experiences for women were with services that provided continuity of care, had strong community links and were controlled by Indigenous communities (Corcoran et al 2017). Continuity of midwifery care can be effectively provided to remote dwelling Aboriginal women and appears to improve outcomes for women and their infants (Lack et al 2016). However, there are barriers preventing the provision of intrapartum midwifery care in remote areas (Corcoran et al 2017). A study among midwives in a large tertiary hospital in South Australia found that communication and building support with Aboriginal health workers and families were important to midwives working with Aboriginal women and identified the following barriers to provision of care (Brown et al 2016):
 - time constraints in a busy hospital
 - lack of flexibility in the hospital protocols and policies
 - the system whereby women were required to relocate to birth
 - lack of continuity of care

- lack of support 24 h a day from the Aboriginal workforce
- the speed at which women transitioned through the service.

The midwives had some difficulty differentiating the women's physical needs from their cultural needs and the concept of cultural safety was not well understood. The midwives also determined that women who were living in metropolitan areas had lesser cultural needs than the women who were living in rural and remote areas. Stereotyping and racism was also identified within the study.

While these programs have been identified as beneficial, not all Aboriginal and Torres Strait Islander women have access to these types of programs and many still rely on mainstream services such as GPs and public hospital clinics (Clarke & Boyle 2014). Hence, it is important that mainstream services embed cultural competence into continuous quality improvement. Participation in a continuous quality improvement initiative by primary health care centres in Indigenous communities is associated with greater provision of pregnancy care regarding lifestyle-related risk factors (Gibson-Helm et al 2016b). For example, screening for cigarette smoking was 73% at baseline, 90% (OR 3.0, 95%CI 2.2 to 4.1) after one cycle, 91% (OR 5.1, 95%CI 3.3 to 7.8) after two cycles, 93% (OR:6.3, 95 % CI:3.1-13) after three cycles and 95% (OR:11, 95 % CI:4.3-29) after four cycles (Gibson-Helm et al 2016b).

Birthing on country

Despite policy frameworks that support primary maternity services delivering culturally competent care closer to home, demand from Indigenous women and communities, and multiple recommendations over 25 years, there has been no progress towards establishing and evaluating Birthing on Country services in remote or very remote Australia (Kildea et al 2016). There is an unequivocal relationship between distance to maternity services and poorer clinical and psychosocial outcomes. This lends support to the argument to prioritise Birthing on Country models in remote and very remote areas, where some of the most disadvantaged women in Australia live the furthest from maternity services.

Maternity systems have failed to incorporate the evidence provided by Indigenous women on the impact of social risks of not birthing on country, which include cultural risk (eg the belief that not being born on their land threatens claims to land rights) and emotional risks (having to spend weeks removed from family and other children while awaiting birth) (Kildea et al 2016). Recent empirical work in Australia reconfirms that these risks are still valid, highlighting that they not only cause distress to women and families, but also increase clinical and medical risks (eg women not attending antenatal care, or presenting late in labour, to avoid being flown out of their community for birth).

The risks are greater for Indigenous women from remote and very remote communities, some of whom feel that giving birth in hospitals, many miles from their home, may be the cause of ill health as it breaks the link between strong culture, strong health and the land, a link that is strengthened during birth (Kildea et al 2016). While away from community and other children awaiting the birth, pregnant women are susceptible to anxiety, stress and depression, and often have particular concerns that their other children may be vulnerable to child protection services in their absence.

In a study of birthing services in rural and remote areas, population factors relating to vulnerability and isolation did not increase the likelihood of a local birthing facility, and very remote communities were less likely to have any service (Rolfe et al 2017). In addition, services were influenced by jurisdictional policy.

Adolescent mothers

Adolescent motherhood occurs more often within communities where poverty, Aboriginal and Torres Strait Islander status and rural/remote location intersect (Marino et al 2016). Adolescent pregnancy has been typically linked to a range of adverse outcomes for mother and child. In Australia, the proportion of births among adolescent women is higher among Aboriginal and Torres Strait Islander women than among other adolescent Australian women and the risk of poorer psychosocial and clinical outcomes is greater if these women are not well supported during pregnancy and beyond (Reibel et al 2016). However, a study in the NT suggests that problems usually associated with Aboriginal adolescent births (such as low birth weight) are not due to maternal age, but rather related to the underlying poor

health, socioeconomic disadvantage and a system that is challenged to support these young women, both culturally and medically (Barclay et al 2014).

Drawing on existing literature and consultations with young Aboriginal women and health professionals supporting pregnant Aboriginal women, a West Australian study found that engagement with the health system is encouraged and health outcomes for young mothers and their babies improved through destigmatising of young parenthood and providing continuity of caregiver in culturally safe services with culturally competent health professionals (Reibel et al 2016). Another study noted the critical role of general practitioners in identification of at-risk teens, preventing unintended teenage pregnancy, clinical care of pregnant teens, and promoting the health and wellbeing of teenage mothers and their children (Marino et al 2016).

Midwifery workforce

As outlined above, an increasing number of maternity models recognise the contribution of Indigenous workers who have a variety of titles and job descriptions (Kildea et al 2016). Some recognise the importance and cultural expertise of elders and grandmothers, while others aim to provide women support through bicultural partnerships between midwives and maternal infant health workers.

In 2015 there were 230 Indigenous midwives nationally, comprising only 1% of the midwife population, while Indigenous Australians constitute 3% of the population and 6% of all Australian births (Clarke & Boyle 2014). Additionally there is a marked drop-out of midwifery graduates from clinical roles soon after graduation, which highlights a need for ongoing support (Clarke & Boyle 2014).

Midwifery philosophy aligns strongly with the Indigenous health philosophy and this provides a learning platform for Indigenous student midwives (West et al 2016). Privileging Indigenous culture within midwifery education programs assists students develop a sense of purpose and affirms them in their emerging professional role and within their community. Continuity of care midwifery experiences with Indigenous women are fundamental to increasing the Indigenous midwifery workforce in Australia.

Cultural competency education and training

Cultural competency education and training is a strategy aimed at addressing health disparities, although further development and work are required to appreciate the most effective methods, the flow-on effect of training to patients, and the best tools for measuring cultural competence in individuals, organisations and in the maternity setting (Kildea et al 2016). Critically, "racism constitutes a 'double burden' for Indigenous Australians, encumbering their health as well as access to effective and timely health care services". Achieving culturally competent maternity services is key to improving maternity care and good health for mothers and babies.

Another emerging area in developing a cultural competent workforce is that of trauma-informed care and practice, whereby care providers understand the ongoing impact of intergenerational trauma resulting from historical injustices, colonisation, removal from and dispossession of land, and continuing racism (Kildea et al 2016). This is particularly important given that Indigenous children are over-represented in out-of-home care compared with non-Indigenous children (nine times higher; 35%), with some women encountering the child protection system during pregnancy, leading to the removal of their babies at birth. This is an incredibly distressing situation for all involved, but most particularly the mother. Redirecting funding from removal to supporting vulnerable families would see greater short and long term benefits.

Although maternity services in Australia are designed to offer women the best care, they largely reflect modern western medical values and perceptions of health, risk and safety. This is unlike the Indigenous world view, reflected in their definition of health, which incorporates not just physical wellbeing, but also the social, emotional and cultural wellbeing of individuals and the whole community.

Recent studies have found that:

- ensuring cultural training is an assessable component of practice and recognition that it is as important as the physical aspects of care for the women would be a positive approach for improving the experiences of the women and supporting midwives in practice (Brown et al 2016)

- inclusion of a well-designed unit of study on indigenous culture and health that privileged Aboriginal voices in the classroom and was conceived with substantial Aboriginal input enhanced knowledge among student midwives at a West Australian university and shifted attitudes in a positive direction (Thackrah 2016).

Improving outcomes

System-wide strategies to strengthen health centre and health system attributes that support best-practice antenatal health care for Aboriginal and Torres Strait Islander women are needed. Some strategies can be implemented within health centres while others need partnerships with communities, external services and policy makers (Gibson-Helm et al 2016a).

Approaches to improving the health outcomes for Aboriginal women and their babies in pregnancy include the following.

- systems-based approaches to address socio-economic disadvantage, education and health literacy (Boyle & Eades 2016)
- health services approaches to provide trusted, welcoming and culturally appropriate health services in both community-controlled and government sectors, facilitate better communication between primary and hospital-based services and utilise initiatives such as continuous quality improvement practices that lead to improved services, particularly where staff turnover is high (Boyle & Eades 2016)
- families-based approach, for example smoking prevention and quitting (Boyle & Eades 2016), drinking alcohol, social and emotional wellbeing and nutrition (Gibson-Helm et al 2016a)
- clinical guidelines addressing specific needs of Aboriginal and Torres Strait Islander women in pregnancy, for example screening for infection in young women and those in areas where risk is high (Boyle & Eades 2016)
- support for the particular needs of rural and remote women in accessing care, for example ultrasound services (Boyle & Eades 2016)
- strengthen systems for workforce support, retention and recruitment, patient-centred care, and community capacity, engagement and mobilization (Gibson-Helm et al 2016a).

Summary of studies

Reference	Findings	Comment
(Barclay et al 2014)	<p>Background: This paper presents a summary of a five-year collaborative program between stakeholders and researchers that led to sustainable improvements in the maternity services for remote dwelling Aboriginal women and their infants in the Top End (TE) of Australia.</p> <p>Methods: A mixed-methods health services research program of work was designed, using a participatory approach. The study area consisted of two large remote Aboriginal communities in the Top End of Australia and the hospital in the regional centre (RC) that provided birth and tertiary care for these communities. The stakeholders included consumers, midwives, doctors, nurses, Aboriginal Health Workers (AHW), managers, policy makers and support staff. Data were sourced from: hospital and health centre records; perinatal data sets and costing data sets; observations of maternal and infant health service delivery and parenting styles; formal and informal interviews with providers and women and focus groups. Studies examined: indicator sets that identify best care, the impact of quality of care and remoteness on health outcomes, discrepancies in the birth counts in a range of different data sets and ethnographic studies of 'out of hospital' or health centre birth and parenting. A new model of maternity care was introduced by the health service aiming to improve care following the findings of our research. Some of these improvements introduced during the five-year research program of research were evaluated.</p> <p>Results: Cost effective improvements were made to the acceptability, quality and outcomes of maternity care. However, our synthesis identified system-wide problems that still account for poor quality of infant services, specifically, unacceptable standards of infant care and parent support, no apparent relationship between volume and acuity of presentations and staff numbers with the required skills for providing care for infants, and an 'outpatient' model of care. Services were also characterised by absent Aboriginal leadership and inadequate coordination between remote and tertiary services that is essential to improve quality of care and reduce 'system-introduced' risk.</p> <p>Conclusion: Evidence-informed redesign of maternity services and delivery of care has improved clinical effectiveness and quality for women. However, more work is needed to address substandard care provided for infants and their parents.</p>	Example of successful model

Reference	Findings	Comment
(Bertilone & McEvoy 2015)	<p>Objectives: To report differences in neonatal health outcomes for a community-based antenatal program, the Aboriginal Maternity Group Practice Program (AMGPP; the intervention group), compared with two matched control groups eligible for standard antenatal care.</p> <p>Design: Non-randomised intervention study using data from the Western Australian Midwives Notification System. Regression models were used to report adjusted odds ratios (aORs) for defined neonatal health outcomes.</p> <p>Setting: The AMGPP employed Aboriginal grandmothers, Aboriginal Health Officers, and midwives working in partnership with existing antenatal services to provide care for pregnant Aboriginal women residing in south metropolitan Perth.</p> <p>Participants: 343 women (with 350 pregnancies) who participated in the AMGPP and gave birth between 1 July 2011 and 31 December 2012; historical and contemporary control groups of pregnant Aboriginal women (each including 350 pregnancies), frequency matched for maternal age and gravidity.</p> <p>Main outcome measures: Preterm births, birthweight, neonatal resuscitation, neonatal hospital length of stay longer than 5 days.</p> <p>Results: Babies born to AMGPP participants were significantly less likely to be born preterm (AMGPP, 9.1% v historical controls, 15.9% [aOR, 0.56; 95% CI, 0.35e0.92]; v contemporary controls, 15.3% [aOR, 0.75; 95% CI, 0.58e0.95]); to require resuscitation at birth (AMGPP, 17.8% v historical controls, 24.4% [aOR, 0.68; 95% CI, 0.47e0.98]; v contemporary controls, 31.2% [aOR, 0.71; 95% CI, 0.60e0.85]), or to have a hospital length of stay of more than 5 days (AMGPP, 4.0% v historical controls, 11.3% [aOR, 0.34; 95% CI, 0.18e0.64]; v contemporary controls, 11.6% [aOR, 0.56; 95% CI, 0.41e0.77]).</p> <p>Conclusion: Participation in the AMGPP in south metropolitan Perth was associated with significantly improved neonatal health outcomes.</p>	Example of successful model

Reference	Findings	Comment
(Bertilone et al 2016)	<p>Background: Pregnancy, labour and neonatal health outcomes for Australian Aboriginal women and their infants are frequently worse than those of the general population. Provision of culturally competent services may reduce these differences by improving access to timely and regular antenatal care. In an effort to address these issues, the Aboriginal Maternity Group Practice Program commenced in south metropolitan Perth, Western Australia, in 2011. The program employed Aboriginal Grandmothers, Aboriginal Health Officers and midwives working in a partnership model with pre-existing maternity services in the area. Aim: To identify elements of the Aboriginal Maternity Group Practice Program that contributed to the provision of a culturally competent service.</p> <p>Methods: The Organisational Cultural Competence Assessment Tool was used to analyse qualitative data obtained from surveys of 16 program clients and 22 individuals from partner organisations, and interviews with 15 staff.</p> <p>Findings: The study found that the partnership model positively impacted on the level of culturally appropriate care provided by other health service staff, particularly in hospitals. Two-way learning was a feature. Providing transport, team home visits and employing Aboriginal staff improved access to care. Grandmothers successfully brought young pregnant women into the program through their community networks, and were able to positively influence healthy lifestyle behaviours for clients.</p> <p>Conclusion: Many elements of the Aboriginal Maternity Group Practice Program contributed to the provision of a culturally competent service. These features could be considered for inclusion in antenatal care models under development in other regions with culturally diverse populations.</p>	Example of successful model

Reference	Findings	Comment
(Binks et al 2016)	<p>Objectives: To assess vitamin D status in Indigenous mothers and infants in the Northern Territory, and to determine whether cord blood vitamin D levels are correlated with the risk of infant hospitalisation for acute lower respiratory infection (ALRI).</p> <p>Design and participants: Within a nested cohort of 109 Indigenous mother-infant pairs recruited between 2006 and 2011, we used liquid chromatography-mass spectrometry to measure vitamin D (25(OH)D3) levels in maternal blood during pregnancy (n=33; median gestation, 32 weeks [range, 28–36 weeks]) and at birth (n=106; median gestation, 39 weeks [range, 34–41 weeks]), in cord blood (n=84; median gestation, 39 weeks [range, 36–41 weeks]), and in infant blood at age 7 months (n=37; median age, 7.1 months [range, 6.6–8.1 months]).</p> <p>Main outcome measure: ALRI hospitalisations during the first 12 months of infancy, identified using International Classification of Diseases coding (J09–J22, A37–A37.9).</p> <p>Results: Compared with mean 25(OH)D3 levels in maternal blood during pregnancy (104 nmol/L), mean levels were 23% lower in maternal blood at birth (80 nmol/L) and 48% lower in cord blood samples (54 nmol/L). The mean cord blood 25(OH)D3 concentration in seven infants subsequently hospitalised for an ALRI was 37 nmol/L (95% CI, 25–48 nmol/L), lower than the 56 nmol/L (95% CI, 51–61 nmol/L) in the 77 infants who were not hospitalised with an ALRI (P=0.025).</p> <p>Conclusions: Cord blood 25(OH)D3 concentrations were about half those in maternal blood during the third trimester of pregnancy (about 7 weeks earlier). Most cord blood levels (80%) were classified as vitamin D insufficient (< 75 nmol/L) by existing guidelines, and were lower among infants who were subsequently hospitalised with an ALRI.</p>	Already included in vitamin D chapter

Reference	Findings	Comment
(Boyle & Eades 2016)	<p>Approaches required to improve the health outcomes for Aboriginal women and their babies in pregnancy include the following:</p> <ol style="list-style-type: none"> 1 Systems-based approach: to address socio-economic disadvantage, education and health literacy; 2 Health services approach: to provide trusted, welcoming and culturally appropriate health services in both community-controlled and government sectors, facilitate better communication between primary and hospitalbased services and utilise initiatives such as continuous quality improvement practices that lead to improved services, particularly where staff turnover is high; 3 Families-based approach, for example smoking prevention and quitting; 4 Clinical guidelines: addressing specific needs of Aboriginal and Torres Strait Islander women in pregnancy, for example screening for infection in young women and those in areas where risk is high, screening for asymptomatic bacteriuria in first trimester; 5 Supporting the particular needs of rural and remote women in accessing care, for example ultrasound services. 	Editorial; included in discussion of improving outcomes

Reference	Findings	Comment
(Breckenridge et al 2016)	<p>An important finding of the meta-analysis of evaluations is that the measurement of integration has been impeded by four key factors:</p> <p>The term integration is often applied loosely to describe networks or partnerships of a variety of types. Where services or models have been specifically formulated and designed with the framework of integration as the centerpiece, evaluation commonly has focused on the success or otherwise of one or more of its program components, rather than on the effectiveness of integration itself.</p> <p>Integrated services that respond to sexual assault and intimate partner violence are often diverse in scope and lack uniformity in structure, commonly developing organically to target specific populations within specific contexts.</p> <p>Absence of universal characteristics or evaluation features necessarily renders the development of potential evaluation models difficult, if not impractical.</p> <p>To improve the evidence base on integrated responses to domestic and family violence and sexual assault, a number of technical, conceptual and resourcing challenges need to be overcome, and we outline ways of doing this. Evaluations that assess the impact of integrated responses need to be:</p> <ul style="list-style-type: none"> • theory-driven, demonstrating an understanding of the foundations of both gendered violence and able to incorporate evidence from the literature on best practice in the provision of integrated responses; • end-to-end, incorporating the program rationale, design, and implementation; • measurement-focused, incorporating defined criteria which are driven by both research evidence and stakeholder input; and • comprehensive, including process, output, and outcome indicators. <p>Policy-makers should consider a range of methodological approaches and apply a mixed-methods approach that will facilitate the capacity to empirically measure the domains and in addition synthesise this evaluation data with qualitative evaluation data.</p> <p>The nascent state of evaluations of integrated responses in Australia is a reflection of the relative newness and scale of the field. As is the case with many human service programs in Australia, resources for evaluations have been scarce, limiting the available evidence. The evaluations indicate promising signs of improved service delivery which is valued by practitioners and clients. To build an evidence base on effective integration, different approaches to evaluation than those currently used are needed.</p>	Family violence

Reference	Findings	Comment
(Brown et al 2015)	<p>Background: Aboriginal and Torres Strait Islander families experience markedly worse maternal and child health outcomes than non-Aboriginal families. The objective of this study was to investigate the experiences of women attending Aboriginal Family Birthing Program services in South Australia compared with women attending mainstream public antenatal care.</p> <p>Method: Population-based survey of mothers of Aboriginal babies giving birth in urban, regional, and remote areas of South Australia between July 2011 and June 2013.</p> <p>Results: A total of 344 women took part in the study around 4–9 months after giving birth; 93 percent were Aboriginal and/or Torres Strait Islanders, and 7 percent were non-Aboriginal mothers of Aboriginal babies. Of these, 39 percent of women lived in a major city, 36 percent in inner or outer regional areas, and 25 percent in remote areas of South Australia. Compared with women attending mainstream public antenatal care, women attending metropolitan and regional Aboriginal Family Birthing Program services had a higher likelihood of reporting positive experiences of pregnancy care (adjOR 3.4 [95% CI 1.6–7.0] and adjOR 2.4 [95% CI 1.4–4.3], respectively). Women attending Aboriginal Health Services were also more likely to report positive experiences of care (adjOR 3.5 [95% CI 1.3–9.4]).</p> <p>Conclusions: In the urban, regional, and remote areas where the Aboriginal Family Birthing Program has been implemented, the program has expanded access to culturally responsive antenatal care for Aboriginal women and families. The positive experiences reported by many women using the program have the potential to translate into improved outcomes for Aboriginal families.</p>	Example of successful model

Reference	Findings	Comment
(Brown et al 2016)	<p>Background: Aboriginal and Torres Strait islander women face considerable health disparity in relation to their maternity health outcomes when compared to non-Aboriginal women. Culture and culturally appropriate care can contribute to positive health outcomes for Aboriginal women. How midwives provide culturally appropriate care and how the care is experienced by the women is central to this study.</p> <p>Aim: To explore the lived experiences of midwives providing care in the standard hospital care system to Aboriginal women at a large tertiary teaching hospital.</p> <p>Methods: An interpretive Heideggerian phenomenological approach was used. Semi-structured interviews were conducted with thirteen volunteer midwives which were transcribed, analysed and presented informed by van Manen's approach. Findings: Thematic analysis revealed six main themes: 'Finding ways to connect with the women', 'building support networks – supporting with and through Aboriginal cultural knowledge', 'managing the perceived barriers to effective care', 'perceived equity is treating women the same', 'understanding culture' and 'assessing cultural needs – urban versus rural/remote Aboriginal cultural needs'.</p> <p>Conclusion: The midwives in this study have shared their stories of caring for Aboriginal women. They have identified communication and building support with Aboriginal health workers and families as important. They have identified perceived barriers to the provision of care: the time constraints in a busy hospital; lack of flexibility in the hospital protocols and policies; the system whereby women were required to relocate to birth; lack of continuity of care; lack of support 24 h a day from the Aboriginal workforce and the speed at which women transitioned through the service.</p> <p>The midwives had some difficulty differentiating the women's physical needs from their cultural needs. The concept of cultural safety was not well understood. The midwives also determined that women who were living in metropolitan areas had lesser cultural needs than the women who were living in rural and remote areas. Stereotyping and racism was also identified within the study.</p> <p>A way forward for standard hospital care could see a strengthening of the partnerships between the Aboriginal workforce, the women and the midwives. Focusing on the development of respectful, positive relationships should be a priority. Consumer feedback would be beneficial to midwifery practice and is required from a cultural safety perspective. Strengthening training with cultural safety as a core concept would align better with the Australian National Competency Standards. Ensuring cultural training was an assessable component of practice and recognition that it is as important as the physical aspects of care for the women would be a positive approach for improving the experiences of the women and supporting midwives in practice.</p>	Example of successful model

Reference	Findings	Comment
(Clarke & Boyle 2014)	<p>Many Aboriginal and Torres Strait Islander women experience healthy pregnancies. The women having babies are generally younger and, on average, have more children during their reproductive life than non-Indigenous women. Aboriginal culture has many strengths that can provide a positive influence, such as a supportive extended family network and kinship, connection to country, and active cultural practices in language, art and music. It informs a more holistic view of wellbeing.</p> <p>For women who experience adverse events in their pregnancies, the reasons are diverse and occur throughout the life course:</p> <ul style="list-style-type: none"> • <i>socioeconomic factors</i> — lower income, higher unemployment, lower educational levels, inadequate infrastructure (eg housing, water supply), increased rates of incarceration • <i>poor health</i> — diabetes mellitus, cardiovascular disease, respiratory disease, kidney disease, communicable diseases, injuries, poor mental health, overweight and underweight • <i>lifestyle factors</i> — lack of physical activity, poor nutrition, harmful levels of alcohol intake, smoking, higher psychosocial stressors (deaths in families, violence, serious illness, financial pressures, contact with the justice system). <p>A number of programs have been implemented around the country to improve the delivery of antenatal services to Aboriginal and Torres Strait Islander women. Evaluations have shown their success in improving uptake of care earlier in the pregnancies, for the duration of the pregnancy and often post-natally, which allows other opportunistic healthcare interventions, such as family planning, cervical screening and improving breastfeeding rates. This shows that if services cater for their needs, women will utilise them. However, not all Aboriginal and Torres Strait Islander women have access to these programs and many still rely on mainstream services such as GPs and public hospital clinics. Hence, it is important that mainstream services embed cultural competence into their quality improvement cycle</p>	Largely based on Module I but with some useful background information, which has been included.

Reference	Findings	Comment
(Corcoran et al 2017)	<p>Aim: To undertake a review of qualitative studies of midwifery models of care for Indigenous women and babies evaluating the different types of services available and the experiences of women and midwives.</p> <p>Methods: A meta-synthesis was undertaken to examine all relevant qualitative studies. The literature search was limited to English-language published literature from 2000–2014. Nine qualitative studies met the inclusion criteria and literature appraisal – six from Australia and three from Canada. These articles were analysed for coding and theme development. Findings: The major themes were valuing continuity of care, managing structural issues, having negative experiences with mainstream services and recognising success.</p> <p>Discussion: The most positive experiences for women were found with the services that provided continuity of care, had strong community links and were controlled by Indigenous communities. Overall, the experience of the midwifery services for Indigenous women was valuable. Despite this, there were still barriers preventing the provision of intrapartum midwifery care in remote areas.</p> <p>Conclusion: The expansion of midwifery models of care for Indigenous women and babies could be beneficial in order to improve cultural safety, experiences and outcomes in relation to pregnancy and birth.</p>	Example of successful model
(de-Vitry Smith 2016)	<p>The distressing statistics on domestic violence are even worse when comparing Indigenous and non- Indigenous Australians. Indigenous women are five times more likely to be a victim of homicide, and 34 times more likely to be hospitalised due to family violence, while domestic assault reports to police are six times higher but are probably underreported due to Indigenous women's mistrust of police officers. Indigenous women fear reporting family violence as their children are over-represented in out-of-home care.</p>	Family violence

Reference	Findings	Comment
(de-Vitry Smith 2016)	<p data-bbox="383 260 1664 320">Health professionals caring for Indigenous women and children can help close the gap by taking the following measures:</p> <ul data-bbox="383 336 1688 842" style="list-style-type: none"> <li data-bbox="383 336 981 360">• learn how to provide culturally responsive care; <li data-bbox="383 376 1581 400">• place women and their families at the centre of their care by listening and responding respectfully; <li data-bbox="383 416 779 440">• being alert to insidious racism; <li data-bbox="383 456 1469 480">• avoid judgemental behaviour which leads to women feeling embarrassment and shame; <li data-bbox="383 496 1688 560">• re-open maternity services in rural and remote communities rather than force Indigenous women to travel to a strange city away from their family; <li data-bbox="383 576 1688 639">• support Indigenous women's desire to birth on country and the importance of the deep spiritual connection with land, kin and tradition related to birthing on country; <li data-bbox="383 655 1603 719">• commit to supporting training for Indigenous midwives. Only 0.9% (223) of Australia's 28,756 registered midwives identified as Indigenous (AIHW, 2014); <li data-bbox="383 735 949 759">• being more aware of institutionalised racism; <li data-bbox="383 775 1664 839">• take the 'Invisible Discriminator' test to become aware of passive or subtle discrimination. This test is part of the beyondblue campaign which targets racial discrimination. 	<p data-bbox="1733 260 2040 424">Some of these points are already covered. Point on Indigenous midwives updated in (Kildea et al 2016)</p>

Reference	Findings	Comment
(Fairthorne et al 2016)	<p>Background: Maternal loss can have a deep-rooted impact on families. Whilst a disproportionate number of Aboriginal women die from potentially preventable causes, no research has investigated mortality in Aboriginal mothers. We aimed to examine the elevated mortality risk in Aboriginal mothers with a focus on external causes.</p> <p>Methods: We linked data from four state administrative datasets to identify all women who had a child from 1983 to 2010 in Western Australia and ascertained their Aboriginality, socio-demographic details, and their dates and causes of death prior to 2011. Comparing Aboriginal mothers with other mothers, we estimated the hazard ratios (HRs) for death by any external cause and each of the sub-categories of accident, suicide, and homicide, and the corresponding age of their youngest child.</p> <p>Results: Compared to non-Aboriginal mothers and after adjustment for parity, socio-economic status and remoteness, Aboriginal mothers were more likely to die from accidents [HR = 6.43 (95 % CI: 4.9, 8.4)], suicide [HR = 3.46 (95 % CI: 2.2, 5.4)], homicide [HR = 17.46 (95 % CI: 10.4, 29.2)] or any external cause [HR = 6.61 (95 % CI: 5.4, 8.1)]. For mothers experiencing death, the median age of their youngest child was 4.8 years.</p> <p>Conclusion: During the study period, Aboriginal mothers were much more likely to die than other mothers and they usually left more and younger children. These increased rates were only partly explained by socio-demographic circumstances. Further research is required to examine the risk factors associated with these potentially preventable deaths and to enable the development of informed health promotion to increase the life chances of Aboriginal mothers and their children.</p>	Maternal deaths — not specific to antenatal care
(Gibson-Helm et al 2016a)	<p>Key message 1: Focus on improving aspects of pregnancy and postnatal care in which there are system-wide 'evidence-to-practice gaps' in delivery. This means improving systems to support best-practice care in the following areas: smoking, drinking alcohol, social and emotional wellbeing, nutrition, and Sudden Unexpected Death in Infancy (SUDI) risk reduction.</p> <p>Key message 2: To achieve wide-scale improvement in maternal health care we need to strengthen systems for workforce support, retention and recruitment, patient-centred care, and community capacity, engagement and mobilisation.</p> <p>Key message 3: Develop system-wide strategies to strengthen health centre and health system attributes that support best-practice maternal health care. Often stakeholders identified the same or similar strategies to address different evidence-practice gaps. Some of the strategies can be implemented within health centres while others need partnerships with communities, external services and policy makers.</p>	Included in advice on improving outcomes

Reference	Findings	Comment
(Gibson-Helm et al 2016b)	<p>Background: Australian Aboriginal and Torres Strait Islander (Indigenous) women are at greater risk of adverse pregnancy outcomes than non-Indigenous women. Pregnancy care has a key role in identifying and addressing modifiable risk factors that contribute to adverse outcomes. We investigated whether participation in a continuous quality improvement (CQI) initiative was associated with increases in provision of recommended pregnancy care by primary health care centers (PHCs) in predominantly Indigenous communities, and whether provision of care was associated with organisational systems or characteristics.</p> <p>Methods: Longitudinal analysis of 2220 pregnancy care records from 50 PHCs involved in up to four cycles of CQI in Australia between 2007 and 2012. Linear and logistic regression analyses investigated associations between documented provision of pregnancy care and each CQI cycle, and self-ratings of organizational systems. Main outcome measures included screening and counselling for lifestyle-related risk factors.</p> <p>Results: Women attending PHCs after ≥ 1 CQI cycles were more likely to receive each pregnancy care measure than women attending before PHCs had completed one cycle e.g. screening for cigarette use: baseline = 73 % (reference), cycle one=90 % [odds ratio (OR):3.0, 95%CI 2.2-4.1], two = 91 % (OR:5.1, 95 % CI:3.3-7.8), three = 93 % (OR:6.3, 95 % CI:3.1-13), four = 95 % (OR:11, 95 % CI:4.3-29). Greater self-ratings of overall organizational systems were significantly associated with greater screening for alcohol use ($\beta = 6.8$, 95 % CI:0.25-13), nutrition counselling ($\beta = 8.3$, 95 % CI:3.1-13), and folate prescription ($\beta = 7.9$, 95 % CI:2.6-13).</p> <p>Conclusion: Participation in a CQI initiative by PHCs in Indigenous communities is associated with greater provision of pregnancy care regarding lifestyle-related risk factors. More broadly, these findings support incorporation of CQI activities addressing systems level issues into primary care settings to improve the quality of pregnancy care.</p>	Included in discussion of continuous quality improvement

Reference	Findings	Comment
(Jongen et al 2014)	<p>This study reviewed the existing knowledge output on Aboriginal and Torres Strait Islander Maternal Child Health (MCH) programs and services with the objective to advance understanding of the current evidence base and inform MCH service development, including the identification of new research priorities.</p> <p>Methods: A systematic search of the electronic databases Informit, Proquest, PubMed, Scopus, Wiley, and Cinahl, and 9 relevant websites was undertaken for the period 1993–2012. The reference lists of MCH program reviews were hand-searched for additional relevant studies which met the eligibility criteria. The study designs of included publications were classified and the characteristics extracted and categorised. Evaluation quality was assessed using the Effective Public Health Practice Project (EPHPP) Quality Assessment Tool for Quantitative Studies and the Critical Appraisal Skills Program (CASP) tool for qualitative studies.</p> <p>Results: Twenty-three search results were identified for inclusion, with the majority published in 2003–2012. Fifty two percent of publications reported on programs and services operating out of Aboriginal Community Controlled Health Organisations, with antenatal and postnatal care the main intervention type/s, and health promotion/ education and advice/support the most common intervention component. Outcomes such as increased antenatal attendance and higher infant birth weights were reported in some intervention studies, however methodological quality varied considerably with quantitative studies typically rated weak.</p> <p>Conclusion: The prevalence of community controlled and/or community-based programs is significant given the health and wellbeing implications of self-determination. While the literature highlights the promise of many intervention models and program components used there are some significant gaps in the documentation and implementation of important MCH interventions. Similarly, while positive health outcomes were reported there are issues with key measures used and study quality. This review highlights the need to improve the quality of evaluations of MCH programs for Aboriginal and Torres Strait Islander women and to address the key evidence gaps in responding to their health and wellbeing needs.</p>	No information of relevance to the chapter.

Reference	Findings	Comment
(Kildea et al 2016)	<p>The well established disparities in health outcomes between Indigenous and non-Indigenous Australians include a significant and concerning higher incidence of preterm birth, low birth weight and newborn mortality. Chronic diseases (eg, diabetes, hypertension, cardiovascular and renal disease) that are prevalent in Indigenous Australian adults have their genesis in utero and in early life. Applying interventions during pregnancy and early life that aim to improve maternal and infant health is likely to have long lasting consequences, as recognised by Australia's National Maternity Services Plan (NMSP), which set out a 5-year vision for 2010–2015 that was endorsed by all governments (federal and state and territory). We report on the actions targeting Indigenous women, and the progress that has been achieved in three priority areas:</p> <ul style="list-style-type: none"> < The Indigenous maternity workforce; < Culturally competent maternity care; and; < Developing dedicated programs for "Birthing on Country". <p>The timeframe for the NMSP has expired without notable results in these priority areas. More urgent leadership is required from the Australian government. Funding needs to be allocated to the priority areas, including for scholarships and support to train and retain Indigenous midwives, greater commitment to culturally competent maternity care and the development and evaluation of Birthing on Country sites in urban, rural and particularly in remote and very remote communities. Tools such as the Australian Rural Birth Index and the National Maternity Services Capability Framework can help guide this work.</p>	Information on priority areas included.

Reference	Findings	Comment
(Lack et al 2016)	<p>Background: In Australia, Aboriginal women and babies experience higher maternal and perinatal morbidity and mortality rates than their non-Aboriginal counterparts. Whilst midwifery led continuity of care has been shown to be safe for women and their babies, with benefits including reducing the preterm birth rate, access to this model of care in remote areas remains limited. A Midwifery Group Practice was established in 2009 in a remote city of the Northern Territory, Australia, with the aim of improving outcomes and access to midwifery continuity of care. Aim: The aim of this paper is to describe the maternal and newborn outcomes for women accessing midwifery continuity of care in a remote context in Australia.</p> <p>Methods: A retrospective descriptive design using data from two existing electronic databases was undertaken and analysed descriptively. Findings: In total, 763 women (40% of whom were Aboriginal) gave birth to 769 babies over a 4-year period. There were no maternal deaths and the rate of perinatal mortality was lower than that across the Northern Territory. Lower rates of preterm birth (6%) and low birth weight babies (5%) were found in comparison to population based data.</p> <p>Conclusion: Continuity of Midwifery Care can be effectively provided to remote dwelling Aboriginal women and appears to improve outcomes for women and their infants.</p>	Example of successful model

Reference	Findings	Comment
(MacRae & Hoareau 2016)	<p data-bbox="383 260 1240 284">Extent of illicit drug use among Aboriginal and Torres Strait Islander people</p> <ul data-bbox="383 300 1697 560" style="list-style-type: none"> <li data-bbox="383 300 1697 360">• Illicit drug use among Aboriginal and Torres Strait Islander people needs to be understood within the social and historical context of colonisation, dispossession of land and culture, and economic exclusion. <li data-bbox="383 376 1576 400">• Surveys consistently show that most Aboriginal and Torres Strait Islander people do not use illicit drugs. <li data-bbox="383 416 1697 478">• In 2012-2013, 22% of Aboriginal and Torres Strait Islander people aged 15 years and older had used an illicit drug in the 12 months prior to the survey. <li data-bbox="383 494 1666 557">• In 2012-2013, cannabis was the most common recently used illicit drug for Aboriginal and Torres Strait Islander people, followed by analgesics and sedatives for non-medical use, and amphetamines. <p data-bbox="383 572 562 596">Health impacts</p> <ul data-bbox="383 612 1697 911" style="list-style-type: none"> <li data-bbox="383 612 1697 675">• Illicit drug use has been estimated to be responsible for 3.4% of the overall burden of disease among Aboriginal and Torres Strait Islander people and 2.8% of deaths. <li data-bbox="383 691 1697 753">• Cannabis use among Aboriginal and Torres Strait Islander people has been linked with increased risk of anxiety, depression and psychosis; injecting drug use is associated with an increased risk of hepatitis C and HIV infection. <li data-bbox="383 769 1615 831">• In 2012-13, the most common drug-related conditions resulting in hospitalisation were for 'poisoning' and 'mental and behavioural disorders'. <li data-bbox="383 847 1666 909">• Illicit drug use has been identified as a major risk factor for suicide among Aboriginal and Torres Strait Islander people. <p data-bbox="383 925 1285 949">Social impacts of drug use among Aboriginal and Torres Strait Islander people</p> <ul data-bbox="383 965 1697 1190" style="list-style-type: none"> <li data-bbox="383 965 1323 989">• Illicit drug use is a significant contributing factor in harms to children and family. <li data-bbox="383 1005 1697 1107">• The 2008 NATSISS found that Aboriginal and Torres Strait Islander people aged 15 years and older who had used substances in the previous 12 months were twice as likely to have been the victim of physical or threatened violence than were Aboriginal and Torres Strait Islander people who had not used substances . <li data-bbox="383 1123 1637 1185">• In 2010, 68% of Aboriginal and Torres Strait Islander prison entrants reported illicit drug use in the previous 12 months. 	Substance use

Reference	Findings	Comment
(Marino et al 2016)	<p>Teenage mothers may have experienced family, sexual, and partner violence, family disruption, and socioeconomic disadvantage. Outcomes on a range of peripartum measures are worse for teenage mothers and their babies. Longer term risks for the mother include depression and rapid repeat pregnancy; for the child, intergenerational teenage parenthood; and for both, socioeconomic disadvantage. Teenage motherhood occurs more often within communities where poverty, Aboriginal and Torres Strait Islander status and rural/remote location intersect. General practitioners play a critical role in identification of at-risk teens, preventing unintended teenage pregnancy, clinical care of pregnant teens, and promoting the health and wellbeing of teenage mothers and their children.</p>	Adolescent mothers
(Middleton et al 2017)	<p>Objectives: To evaluate implementation and outcomes of the Aboriginal Family Birthing Program (AFBP), which provides culturally competent antenatal, intrapartum and early postnatal care for Aboriginal families across South Australia (SA).</p> <p>Methods: Analysis of births to Aboriginal women in SA 2010-2012; interviews with health professionals and AFBP clients.</p> <p>Results: Around a third of all Aboriginal women giving birth in SA in 2010-2012 (n=486) attended AFBP services. AFBP women were more likely to be more socially disadvantaged, have poorer pregnancy health and to have inadequate numbers of antenatal visits than Aboriginal women attending other services. Even with greater social disadvantage and higher clinical complexity, pregnancy outcomes were similar for AFBP and other Aboriginal women. Interviews with 107 health professionals (including 20 Aboriginal Maternal and Infant Care (AMIC) workers) indicated differing levels of commitment to the model, with some lack of clarity about AMIC workers and midwives roles. Interviews with 20 AFBP clients showed they highly valued care from another Aboriginal woman.</p> <p>Conclusions: Despite challenges, the AFBP reaches out to women with the greatest need, providing culturally appropriate, effective care through partnerships.</p> <p>Implications for Public Health: Programs like the AFBP need to be expanded and supported to improve maternal and child health outcomes for Aboriginal families.</p>	Example of successful program

Reference	Findings	Comment
(Murphy & Best 2012)	The Aboriginal Maternal and Infant Health Service was established to improve the health of Aboriginal women during pregnancy and decrease perinatal morbidity and mortality for Aboriginal babies. The Service is delivered through a continuity-of-care model, where midwives and Aboriginal Health Workers collaborate to provide a high quality maternity service that is culturally sensitive, women centred, based on primary health-care principles and provided in partnership with Aboriginal people. An evaluation of the Service found that the program is achieving its goals in relation to the provision of antenatal and postnatal care and has demonstrated improvements in perinatal morbidity and mortality rates.	Example of successful model
(Reibel et al 2016)	Adolescent pregnancy has been typically linked to a range of adverse outcomes for mother and child. In Australia, Aboriginal and Torres Strait Islander women have a higher proportion of adolescent births compared with other adolescent Australian women, and are at greater risk of poorer psychosocial and clinical outcomes if they are not well supported during pregnancy and beyond. Drawing on existing literature and consultations with young Aboriginal women and health professionals supporting pregnant Aboriginal women in Western Australia, this paper discusses the importance of creating models of antenatal care using a "social determinants of health" framework. Destigmatising young parenthood and providing continuity of caregiver in culturally safe services, with culturally competent health professionals provides a means to encourage engagement with the health system and improve health outcomes for young mothers and their babies.	Adolescent mothers

Reference	Findings	Comment
(Rolfe et al 2017)	<p>Background: Australia has a universal health care system and a comprehensive safety net. Despite this, outcomes for Australians living in rural and remote areas are worse than those living in cities. This study will examine the current state of equity of access to birthing services for women living in small communities in rural and remote Australia from a population perspective and investigates whether services are distributed according to need. Methods: Health facilities in Australia were identified and a service catchment was determined around each using a one-hour road travel time from that facility. Catchment exclusions: metropolitan areas, populations above 25,000 or below 1,000, and a non-birthing facility within the catchment of one with birthing. Catchments were attributed with population-based characteristics representing need: population size, births, demographic factors, socio-economic status, and a proxy for isolation - the time to the nearest facility providing a caesarean section (C-section). Facilities were dichotomised by service level – those providing birthing services (birthing) or not (no birthing). Birthing services were then divided by C-section provision (C-section vs no C-section birthing). Analysis used two-stage univariable and multivariable logistic regression.</p> <p>Results: There were 259 health facilities identified after exclusions. Comparing services with birthing to no birthing, a population is more likely to have a birthing service if they have more births, (adjusted Odds Ratio (aOR): 1.50 for every 10 births, 95% Confidence Interval (CI) [1.33-1.69]), and a service offering C-sections 1 to 2 h drive away (aOR: 28.7, 95% CI [5.59-148]). Comparing the birthing services categorised by C-section vs no C-section, the likelihood of a facility having a C-section was again positively associated with increasing catchment births and with travel time to another service offering C-sections. Both models demonstrated significant associations with jurisdiction but not socio-economic status.</p> <p>Conclusions: Our investigation of current birthing services in rural and remote Australia identified disparities in their distribution. Population factors relating to vulnerability and isolation did not increase the likelihood of a local birthing facility, and very remote communities were less likely to have any service. In addition, services are influenced by jurisdictions.</p>	Included in context of women having to travel off country to give birth.

Reference	Findings	Comment
(Senior et al 2016)	<p>Drawn from a sample of 88 Indigenous young people in five locations in urban and remote Northern Australia, this research utilised a combination of qualitative approaches to encourage young people to discuss their ideas about sexual relationships and violence. Indigenous youth discussed highly public displays of violence, as well as violence within intimate settings and the interrelationships between these two arenas. A key finding of this research was that young people described violence as an accepted part of their sexual relationships and this normalisation led to significant tensions in their experiences and management of their everyday relationships. While violence around young people's relationships in remote communities was reported to some extent as being controlled through both the public and controlled form they take, we found that the increasing mobility of young people from remote to urban locations due to education opportunities and the impact of social media can lead to more serious forms of violence and tension in the maintenance of young people's sexual relationships. This contributes new findings to the literature on Indigenous young people's experiences in relationship forming and management, an area that has received little attention in the academic literature.</p>	Family violence
(Thackrah 2016)	<p>This study arose out of initiatives in Australian universities, especially in health science faculties, to incorporate content on Aboriginal cultures and health in curricula. This study focuses on midwifery students' responses to content in a first-year unit on Indigenous Cultures and Health introduced for all undergraduate health science students at a WA university, knowledge acquisition, attitude change, cultural immersion experiences and preparedness to deliver culturally secure care to pregnant and birthing Aboriginal women. Postgraduate midwifery students who did not complete the unit provided a useful source of comparison.</p> <p>Results: A well-designed and innovative unit that privileges Aboriginal voices in the classroom and is conceived with substantial Aboriginal input can enhance knowledge and shift attitudes in a positive direction. In a safe learning environment characterised by established guidelines for open discussions, students confronted uncomfortable truths about shared history, but all developed a capacity for empathy and critical reflection. While content was met with pockets of resistance, student responses were overwhelmingly positive. However, questions remain over the longer term impact of content delivered in the unit as a significant decline in retention of knowledge and positive attitudes towards Aboriginal people was observed among students in subsequent years of the program.</p>	Included in discussion of workforce education

Reference	Findings	Comment
(Ussher et al 2016)	<p>Background: The colonisation of Australia has been associated with traumatic consequences for Aboriginal health and wellbeing, including the breakdown of the traditional family unit and negative consequences for the mother/ child relationship. Early-intervention programs have been developed to assist families to overcome disadvantage and strengthen mother/child attachment. However, there is no research examining Aboriginal women's subjective experiences and constructions of motherhood in the context of such programs, and no research on the perceived impact of such programs, from the perspective of Aboriginal mothers and healthcare workers (HCWs), with previous research focusing on child outcomes.</p> <p>Method: Researchers conducted participant observation of an early intervention program for Aboriginal mothers and young children over a 6 month period, one-to-one interviews and a focus group with 10 mothers, and interviews with nine HCWs, in order to examine their perspectives on motherhood and the intervention program.</p> <p>Results: Thematic analysis identified 2 major themes under which subthemes were clustered. Constructions of motherhood: 'The resilient mother: Coping with life trauma and social stress' and 'The good mother: Transformation of self through motherhood'; Perspectives on the intervention: "'Mothers come to life": Transformation through therapy'; and "'I know I'm a good mum": The need for connections, skills and time for self'. Conclusions: The mothers constructed themselves as being resilient 'good mothers', whilst also acknowledging their own traumatic life experiences, predominantly valuing the peer support and time-out aspects of the program. HCWs positioned the mothers as 'traumatised', yet also strong, and expressed the view that in order to improve mother/child attachment a therapeutic transformation is required. These results suggest that early interventions for Aboriginal mothers should acknowledge and strengthen constructions of the good and resilient mother. The differing perspectives of mothers and HCWs on the role and impact of the early intervention program reinforces the need for Aboriginal mothers to be involved in the design and implementation of services aimed at assisting their families.</p>	Not specific to antenatal care

Reference	Findings	Comment
(West et al 2016)	<p>Background: Evidence is emerging of the benefits to students of providing continuity of midwifery care as a learning strategy in midwifery education, however little is known about the value of this strategy for midwifery students. Aim: To explore Indigenous students' perceptions of providing continuity of midwifery care to Indigenous women whilst undertaking a Bachelor of Midwifery.</p> <p>Methods: Indigenous Bachelor of Midwifery students' experiences of providing continuity of midwifery care to Indigenous childbearing women were explored within an Indigenous research approach using a narrative inquiry framework. Participants were three Indigenous midwifery students who provided continuity of care to Indigenous women.</p> <p>Findings: Three interconnected themes; facilitating connection, being connected, and journeying with the woman. These themes contribute to the overarching finding that the experience of providing continuity of care for Indigenous women creates a sense of personal affirmation, purpose and a validation of cultural identity in Indigenous students.</p> <p>Discussion and conclusions: Midwifery philosophy aligns strongly with the Indigenous health philosophy and this provides a learning platform for Indigenous student midwives. Privileging Indigenous culture within midwifery education programs assists students develop a sense of purpose and affirms them in their emerging professional role and within their community. The findings from this study illustrate the demand for, and pertinence of, continuity of care midwifery experiences with Indigenous women as fundamental to increasing the Indigenous midwifery workforce in Australia. Australian universities should provide this experience for Indigenous student midwives.</p>	Midwifery workforce

Exclusions

Study	Reason for exclusion
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