Evaluation of the Aboriginal Medical Service Western Sydney Antenatal Program 2015

Aboriginal Medical Service
WESTERN SYDNEY

REACCH
Research Excellence in Aboriginal Community Controlled Health

Executive summary

- The Aboriginal Medical Service Western Sydney (AMSWS) is an Aboriginal Community Controlled Health Service which has been providing comprehensive, wholistic health services to the Aboriginal and Torres Strait Islander Community of Greater Western Sydney since 1987. At the time of writing this report (2015), AMSWS is about to shut its services after its funding from the Federal Government was cut.
- AMSWS antenatal program has been operating since 1990. A large-scale evaluation report was released in 1998. This report presents the first major evaluation of the service since then.
- The report includes a literature review about antenatal services in Aboriginal Community Controlled Health Services, and a comprehensive analysis of five data sets, including a case file audit of AMSWS antenatal patients, a survey of patients, and comparative data from the previous (1998) report as well as general population statistics from NSW (Aboriginal and Torres Strait Islander population data, and general population data).
- AMSWS antenatal model of care is compatible with what is identified in the literature as 'Common features of successful, documented Aboriginal-specific maternal and child health programs' (Herceg 2005; quoted in: Hunt 2008).
- AMSWS antenatal patients are more likely to be in their teens (22%) compared with NSW Aboriginal and Torres Strait Islander general data (18.62%), and are also less likely to be experiencing their first pregnancy (20% compared with 24.53%).
- Rate of smoking (56%) has declined compared to the previous evaluation (67.92%), but is still higher than general NSW Aboriginal and Torres Strait Islander population data (49.9%). Both are several times higher than NSW general data (10.45%).
- AMSWS antenatal patients are more likely than other NSW Aboriginal and Torres Strait Islander antenatal patients to attend the clinic before week 14.
- Most AMSWS antenatal patients rely on the free transportation service, which helps to ensure ongoing continuous care.
- AMSWS antenatal patients rate the antenatal program very highly, and most do not access any other antenatal services.
- Birth outcomes of AMSWS antenatal patients are mixed, with a higher rate of normal vaginal births compared with the general population, but also higher rates of preterm birth and birth weight of under 2500 gram.
- In the time of the audit, the program cared for over 13% of Aboriginal and Torres Strait Islander mothers Western Sydney and the Blue Mountains. Given that the program serves a highly disadvantaged population that suffers from some of the worst health outcomes in NSW, the impending loss of this program would leave a significant gap that could not be easily replaced with mainstream programs.

Table of content:

List of tables

List of figures

1. Project background

1.1 Background to AMSWS

The Aboriginal Medical Service Western Sydney (AMSWS) is an Aboriginal Community Controlled Health Service (ACCHS), based in Mount Druitt, and providing comprehensive, wholistic[1] health services to the Aboriginal and Torres Strait Islander population of Greater Western Sydney and the Blue Mountains. AMSWS currently has over 11,000 active patients

AMSWS is run by a community-elected board, and provides a wide range of comprehensive medical and health services, completely free for the patients. These include GP services, visiting specialists, mental health services, health promotion, elders programs, and services such as transport, home visits, and liaison with other services.

One of the programs offered by AMSWS is the Aboriginal Maternal and Infant Health Strategy, more commonly known as the antenatal program. In this report, the program is referred to as the antenatal program, or the antenatal service.

At the time of writing (July 2015), AMSWS is about to be forced into liquidation after 28 years of operation, due to a decision by the Federal Government to stop funding the service. This decision was met with widespread community anger and mobilisation to save this crucial community asset. However, at the moment, AMSWS is about to cease operations, and it is unclear whether a new Aboriginal Community Controlled Health Service can be started and essential programs such as the antenatal program be saved.

1.2 Background to this evaluation

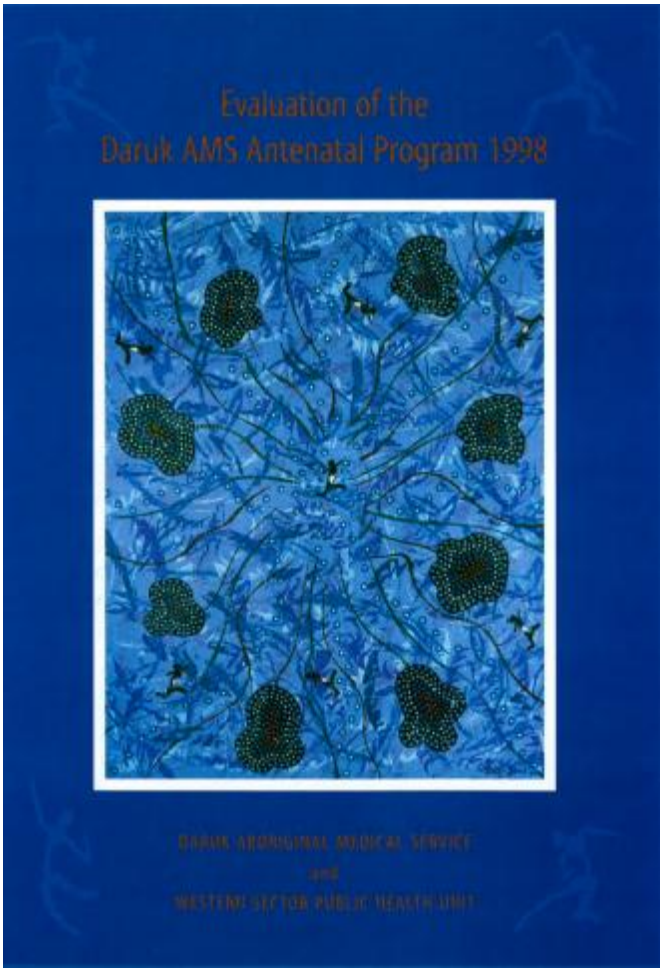
The first evaluation of AMSWS (then-Daruk Aboriginal Medical Service, or Daruk AMS) antenatal program was released in 1998, and was prepared as a collaboration between then-Daruk AMS and Western Sector Public Health Unit. The report includes a

[1] Wholistic and holistic are often used interchangeably. In Aboriginal Community Controlled Health Services, the term wholistic is often preferred. See, for example, the definition of wholistic health in: http://ahmrc.org.au/index.php?option=com_content&view=article&id=35:definition-of-aboriginal-health&catid=4:about-ahmrc&Itemid=37

comprehensive audit of all Daruk AMS antenatal program patient files from 1990 to 1996. The report is a comprehensive evaluation which still offers insight into an important community health program.

This current evaluation is the first major evaluation of AMSWS antenatal program since the original one was released. The project was enabled by the REACCH project (Research Excellence in Aboriginal Community Controlled Health), a collaboration of four Aboriginal Community Controlled Health Services with the Kirby Institute at the University of New South Wales, and the National Aboriginal Community Controlled Health Organisation (NACCHO). One of the main goals of the REACCH collaboration was to increase the capacity of member services to carry their own research projects, based on the needs and priorities of each service. The REACCH collaboration has concluded at the end of 2014.

One of the projects AMSWS pursued with the REACCH project support was the evaluation of the AMSWS antenatal program, the first major evaluation of the project since the 1998 evaluation. The project commenced in 2013, with the drawing of a protocol and an application for ethical approval, which was secured later that year from the AHMRC Ethics Committee.



The project team included members from two AMSWS teams and Kirby Institute:

1. AMSWS Population Health Unit: Dea Delaney-Thiele and Guy Gillor.
2. AMSWS antenatal team: Veronica Henry, Anne Maree Hogan, and Wendy Thornthwaite.
3. Kirby Institute: Mary Ellen Harrod, Belinda Ford, John Kaldor, and Muhammad Shahid Jamil.

The project outline and survey tool were developed as a collaborative effort of all involved. The surveys were collected during home visits by Veronica Henry and Anne Maree Hogan of the AMSWS antenatal team. The file audit was carried by Belinda Ford of Kirby Institute. The literature review, data analysis, report writing and editing were conducted by Guy Gillor of AMSWS Population Health Unit. The front cover was designed by Margaret Allan.

1.3 AMSWS antenatal program and model of care

AMSWS has been offering comprehensive antenatal services since 1990. Because of the longevity of the program, many of the current patients were cared for by the program when they were born, and have now returned to the program as mothers. The pending loss of this program, and of AMSWS as a whole, will leave a real gap in antenatal health in the community.

Prior to the establishment of the then-Daruk AMS antenatal program in 1990, the need for an antenatal program in the community was significant, given the poorer pregnancy outcomes and generally poorer health outcomes. Prior to the establishment of the antenatal program, Aboriginal women had low attendance at mainstream services. Reasons as detailed in the first evaluation (Daruk Aboriginal Medical Service and Western Sector Public Health Unit, 1998) included: difficulty communicating and relating to staff, poor accessibility, alienation, racism, and a sense of disempowerment by hospital services.

The AMSWS antenatal team includes:

1 A full-time Aboriginal antenatal health worker;
2 A full-time midwife;
3 General Practitioner; and
4 Visiting obstetrician.

The AMSWS antenatal team run a clinic two days a week, and the Aboriginal Health Worker and the Midwife conduct home visits, hospital visits, and coordination with other services on other days.

Below is the model of care, which has been evolving since the start of the program in 1990:

- A pregnant patient may be referred to the antenatal program by a GP, within AMSWS or external. A patient may also self-refer.
- A member of the antenatal team contacts the woman to book her in for her first antenatal meeting. The aim of the team is to have the woman attend her first antenatal appointment between 8 and 13 weeks into the pregnancy.
- During the first antenatal visit, hospital booking is usually organised, as well as a general check-up and information.
- From then, the patient is streamed to either attend the AMSWS antenatal clinic or, if assessed as needing specialist care or review, referred to one of the two local obstetric hospitals, Nepean and Blacktown for assessment re ongoing antenatal care plan, the patient attends a check-up at the AMSWS antenatal clinic every 4 weeks.
- During pregnancy, optional home visits and family support may be offered, based on particular needs of each patient and her family.

- The patient and her family's other health needs are also addressed as part of the wholistic care, using AMSWS' various other programs and specialist services, or external services if needed.
- From 36 weeks patients see the AMSWS Obstetrician weekly.
- During the delivery, based on the patient's preference, either the midwife or the Aboriginal antenatal health worker from AMSWS can be at the hospital for ongoing support.
- A week after delivery, a home visit is usually arranged.
- Ongoing postnatal support continues up to 8 weeks after delivery.

The next chapter will present an overview of literature regarding antenatal programs in Aboriginal Community Controlled Health Services settings, and will then be followed by the evaluation findings and analysis chapter.

Left to right: Antenatal GP Wendy Thornthwaite, Aboriginal antenatal health worker Veronica Henry, and midwife Anne Maree Hogan.

2. Literature review: Antenatal programs in Aboriginal Community Controlled Health Services

2.1 Introduction and methodology

Pregnancy outcomes among Aboriginal and Torres Strait Islander women in Australia are generally poorer than non-Aboriginal and/or Torres Strait Islander women (Kelly Graham and Sullivan 2010; Maternity Services Review 2009). Aboriginal and Torres Strait Islander women "suffer a disproportionate burden of illness in pregnancy and childbirth" (Maternity Services Review 2009 p. 29), and at the same time are "less likely to access antenatal care in the first trimester of pregnancy, when many risk factors could be addressed" (Maternity Services Review 2009 p. 27).

Existing literature on Aboriginal women's antenatal health has been described as "insufficient" and "inadequate" (Hancock, 2006, p. 4). Accordingly, recommendations on antenatal care for Aboriginal women are then "broad and non-specific" (Hunt 2006 p. 54). A number of literature reviews attempted to cover the existing evidence regarding Aboriginal-specific antenatal services (Hancock 2006; Herceg 2005; Kelly Graham and Sullivan 2010; Rumbold and Cunningham 2008), but even these are limited in number and scope.

The following literature review will focus on evidence emerging from the experience of antenatal services in an Indigenous context, and in particular, those based in Aboriginal Community Controlled Health Services (ACCHSs), relevant social determinants of health and their effects on antenatal services, and current research on best practice in antenatal care delivery.

To conduct this review, a systematic search of literature was employed, utilising a number of peer-reviewed and relevant grey literature databases and search tools, including:

- PubMed
- Medline
- HealthInfoNet
- Google Scholar

All of the above databases were searched using various combinations of the terms:

- Aboriginal, Indigenous
- Antenatal, Ante-natal, Perinatal, Peri-natal, Prenatal, Pre-natal, Natal, Neonatal, Neo-natal
- Pregnancy, birth, midwifery.

The stages of the search for literature included:

1. Initial search in PubMed and Medline for relevant peer-reviewed articles
2. A complementary search in Google Scholar to find any additional sources not found in the two health-oriented databases
3. A further search on HealthInfoNet to find any literature not found in the initial search, as well as relevant "grey literature" (such as policy reports).

2.2 Existing experience of antenatal care in Aboriginal Community Controlled Health Services.

A literature review by Rumbold and Cunningham identifies 10 evaluations of antenatal services in Aboriginal communities in Australia that currently appear in accessible literature (Rumbold and Cunningham 2008). According to the authors of the literature review, the number of available evaluations is "almost certainly a reflection of a lack of evaluations rather than a lack of activity in the area of antenatal care" (p. 95). A general lack of consistency in the outcomes was reported, making it impossible to carry out an effective comparison of the data.

According to Rumbold and Cunningham, reviews of the 10 services identified by the authors, which include the 1998 review of the then-Daruk (now AMSWS) antenatal program generally show "modest increases in indicators of antenatal care utilization, most notably increases in the proportion of women accessing antenatal care in the first trimester" (Rumbold and Cunningham 2008 p. 95). Some of the care programs showed evidence of improvement in preterm birth as well as an improvement in the generally low birth weight.

A 2006 study in Mildura compared the outcomes of maternity care offered by the Mildura Aboriginal Health Service's (MAHS) Women's Business Service with general outcomes for maternity care in rural Victoria. In general, the results showed significantly better outcomes for women attending the MAHS than the general populace, including: More women reported that their carers "kept them informed" (Campbell and Brown 2004 p. 376); 96% of participants reported that field doctors and midwives "never rushed during check-ups" (p. 376); 85% of participants rated the antenatal service as "very good"; and participants showed higher levels of confidence in taking care of the newborn in the first week at home.

Women interviewed to the MAHS project also had an increased incidence of risk factors, including significantly higher rate of smoking during pregnancy (60%, compared to 29% in the general population).

In the Northern Territory, a community-based antenatal program called Strong Women Strong Babies Strong Culture (SWSBSC) of community-based antenatal interventions, resulted in an increase in birth weight (Mackerras 2001) and increase in the utilisation of antenatal services earlier in the pregnancy (Eades, 2004) among other overall improvements in the health of mothers and babies since the program began in 1993. The program also saw the introduction of tests for genital infections and subsequently a large increase in the rate of diagnosis and treatment (Eades, 2004).

The Townsville Aboriginal and Islander Health Service (TAIHS) operate an antenatal service, Mums and Babies Program, introduced in 2000. The program includes a number of services that have been well documented, evaluated, and published (Eades 2004; Panaretto et al 2005; Panaretto et al 2006a; Panaretto et al 2006b; Panaretto et al 2007). The program includes a special daily clinic and operates in collaboration with mainstream services (Eades 2004).

The Mums and Babies Program has been shown to improve the rate of hospital deliveries by at least doubling the number of antenatal care visits per pregnancy (Panaretto et al 2005; Panaretto et al 2007). It also has increased STI screening of pregnant patients (Panaretto et al 2005). However, low birthweight prevalence and perinatal mortality rates were not affected by the program (Panaretto et al 2005).

The Mums and Babies program's STI screenings showed relatively high rates of infection. Just under 90% of the women accessing the service were screened, with over 20% of the women tested returning positive results for either chlamydia, gonorrhoea, and/or trichomoniasis (Panaretto et al 2006a). According to the reviewers, "While screening for syphilis and hepatitis B is an accepted part of antenatal care protocols, screening for other STI remains omitted from shared antenatal care protocols" (Panaretto et al 2006a p. 223), and the reviewers comment that the high infection rate suggests "that screening for STI should be included in all antenatal care protocols for Indigenous women in Australia" (Panaretto et al 2006a p. 217).

A recent study of The Murri Antenatal Clinic in a public hospital in Brisbane found high levels of satisfaction among patients (Kildea et al 2012). However, the program was limited to prenatal care only with no continuation of care during labour or post-natally. This caused disappointment and feelings of abandonment among most women who were surveyed. In terms of health outcomes, women who attended the Murri Clinic showed lower rates of experiencing perineal trauma, and babies were less likely to be admitted to neonatal intensive care (Kildea et al 2012).

The Winnunga Nimmityjah Aboriginal Health Service Aboriginal Midwifery Access Program in the ACT also delivered improved health outcomes including a reduction in the rate of low birthweight babies and of heart-disease (Wong et al 2011). However, similarly to other

services, high rates of tobacco smoking was also recorded, and the authors recommended making anti-smoking campaigns an important part of an Aboriginal antenatal service.

The Malabar Community Midwifery Link Service in east Sydney has also recently been surveyed (Homer et al 2012). The service is a "community-based, primary health care Midwifery and child health service" (Homer et al 2012 p. 510). The service emphasises the effects of social determinants of health, and is producing increasingly positive outcomes in areas such as early first visits, with over 90% of Aboriginal and Torres Strait Islander women having their first antenatal visit less than 20 weeks into the pregnancy (Homer et al 2012 p. 513).

The cultural appropriateness of antenatal services used by Aboriginal women is key in the delivery of positive health outcomes. A recent review of all existing antenatal services in WA (both mainstream and community-based services) found that about 75% antenatal services used by Aboriginal women "have not achieved a model of service delivery consistent with the principles of culturally responsive care, with few services incorporating Aboriginal specific antenatal protocols/ programme, maintaining access or employing Aboriginal Health Workers" (Reibel and Walker 2010 p. 65). According to the authors, "[t]he implementation of culturally specific guidelines and policies and the allocation of resources and strategies to support staff and organisations to assess improve cultural competence are strongly supported by the findings of the audit" (p. 73).

Another recent study from WA evaluated services in rural and remote Aboriginal communities (Cannon et al 2013). The study suggests that poor access to antenatal services significantly increases women's pregnancy care expenses whilst reducing the antenatal services these women access. Both of these in turn negatively affect pregnancy outcomes.

In a ten-year study conducted from March 1996 to June 2006 in south-west Sydney, the entire population birth data was examined, and neonatal outcomes were compared in order to find similarities and/or differences in outcomes between different care models (Bai, Gyaneshwar and Bauman, 2008). The care models included hospitals, midwives' clinics, and birth centres. Results showed negligible differences in the outcomes, which suggests that different models may all be beneficial, and no one 'right path' to natal care can be offered, according to the authors. However, the results did point out that the women identified in the study as either received no antenatal care or no regular care are more likely to be Aboriginal or Torres Strait Islander women (Bai, Gyaneshwar and Bauman, 2008). Women who received no regular care had a very late first visit, at 26.8 weeks on average, compared to 15.7 weeks of the general study population.

2.3 Social Determinants of Health and the role of ACCHSs

According to Hancock (2006), antenatal care, similarly to other health areas has long been dominated by the biomedical paradigm, seeing pregnancy as "medically problematic" (p. 8), rather than a natural experience that is to be understood in the wider social and cultural context. Others (such as Kildea et al 2012) have also commented that cultural appropriateness is essential in any provision of antenatal care. This view of antenatal care is in line with the ACCHSs movement's working definition of health:

> *Not just the physical well being of an individual but is the social, emotional and cultural well being of the whole community in which each individual is able to achieve their full potential thereby bringing about the total well being of their community. It is a whole-of-life view and includes the cyclical concept of life-death-life.*
> (National Aboriginal Health Strategy Working Party 1989 p. x)

Antenatal care should then be approached wholistically, in a way that combines biomedical advances within the particular social and cultural framework. Kildea et al (2012) have even concluded that "health-related interventions are more likely to succeed when tailored to fit the socio-cultural context" (p. 8).

This wholistic approach to antenatal care also resonates with the WHO principles on pregnancy care. According to the WHO, care should be: demedicalised when possible, based on appropriate technology, regionalised, evidence-based, multidisciplinary, wholistic, family-centred, culturally appropriate, and involving women in the decision making process (Hunt, 2008).

The wholistic approach is based on an understanding of the social determinants of health as factors which profoundly affect peoples' health as well as the way people approach the health system itself. In recent years there has been a slight increase in the available literature around the social determinants that are of particular relevance to the health of Australia's Aboriginal peoples (such as in the notable edited book "Social Determinants of Indigenous Health", Carson et al eds, 2007).

Much of the literature around antenatal services already has a strong focus on the social determinants of health, even if the term itself is not mentioned. Table 1 below contrasts two lists, one detailing features of successful antenatal care services in an Aboriginal community context, and the other detailing difficulties often encountered in such services. It is of note that most, if not all, items on both lists relate to social determinants rather than biomedical ones.

Table 1: Success factors and points of contention in antenatal care delivery in an Aboriginal community context

Common features of successful, documented Aboriginal-specific maternal and child health programs	Common factors that health providers point to as the main difficulties in antenatal services in Aboriginal community context
❖ Community-based and/or community-controlled services ❖ A service location intended for women and children ❖ Providing continuity of care and a broad spectrum of services ❖ Integration with other services (e.g. hospital liaison, shared care) ❖ Outreach activities ❖ Home visiting ❖ A welcoming and safe environment ❖ Flexibility in service delivery and appropriate times ❖ A focus on communication relationship building, and development of trust ❖ Respect for Aboriginal and Torres Strait Islander people and their culture ❖ Respect for family involvement in health issues and child care ❖ Having an appropriately trained workforce ❖ Valuing Aboriginal and Torres Strait Islander staff and female staff ❖ Provision of transport ❖ Provision of child care or playgroups (Herceg 2005 p. 12; quoted in: Hunt 2008 p. 241)	❖ Cultural gaps between the women and [service providers], both as care providers and as non-Aboriginal persons ❖ Lack of time in consultations ❖ Lack of continuity of carer in hospital settings, reducing the opportunities for building relationships and rapport ❖ The complexity and abstract nature of some issues relevant to pregnancy care, for example viruses and screening tests for congenital abnormalities ❖ Women not having existing background knowledge about specific issues, for example HIV and Down Syndrome ❖ The increasingly large volume of information to be provided to women relating to tests and procedures for routine pregnancy care. (Hunt 2006 p. 52)

The AMSWS antenatal program and model of care are highly compatible with the list of 'common features of successful, documented Aboriginal-specific maternal and child health programs' that is reproduced in table 1. At present, AMSWS includes all of these features, with the exception of a provision of child care or playgroups, due to lack of appropriate resources.

Similar findings to those listed in table 1 are found in other literature. Baker et al (2011) for example reviewed the applicability and transferability of antenatal intervention into an

Aboriginal context in Australia. The authors recommend that "[i]nterventions that are home-based and have outreach components seem feasible and are likely to provide health improvements", and that "[d]esign, implementation and delivery of antenatal and breast-feeding interventions should include adequate input from members of the community" (Baker et al 2011 p. 217). This then relates to the "overarching theme" (Hunt 2006 p. 54) in the literature of a "call for the greater involvement of Aboriginal women themselves" in the decision-making process, the development of guidelines, and provision and evaluation of services (Hunt 2006 p. 54). Other relevant literature emphasise the need to "research WITH Aboriginal women not ON Aboriginal women" (Hancock, 2006, p. 4, emphasis in source).

Similar knowledge was collected in 2009 from a detailed consultations with Aboriginal women regarding proper antenatal care were held by Congress Alukura, the women's health service of the Central Australian Aboriginal Congress, a community-controlled health service in Alice Springs (Wilson, 2009). One notable outcome out of the consultations was that the aspects of proper antenatal care, as discussed by the women, "incorporated many non-medical, as well as bio-medical and health service-related, factors", including "the need to feel free and be safe from violence, the role of their families, the importance of transport and the nature of their relationship with a health provider" (Wilson 2009 p. 61). In addition, women expressed their wish to have a wide range of options for their antenatal care.

In terms of difficulties that women face in the service, in addition to the information presented in Table 1, another recent study focused the experiences of women from rural and remote areas as they arrive to a hospital maternity unit for birth (Dietsch et al 2010). The study reveals that Aboriginal women are more likely to experience midwifery bullying. According to the authors, "[e]motional safety for women accessing midwifery services needs to be as highly valued as physical safety" (Dietsch et al 2010 p. 58). A main issue for these women who experienced midwifery bullying was a lack of choice in the place of delivery, which affirms the need for choice in care, as detailed in the work by Wilson (2009). Data from other surveys confirms this, with the Maternity Service Review (2009) concluding that Aboriginal and Torres Strait Islander women were more likely to access services "that are respectful and provided culturally safe places" (Maternity Services Review 2009 p. 30).

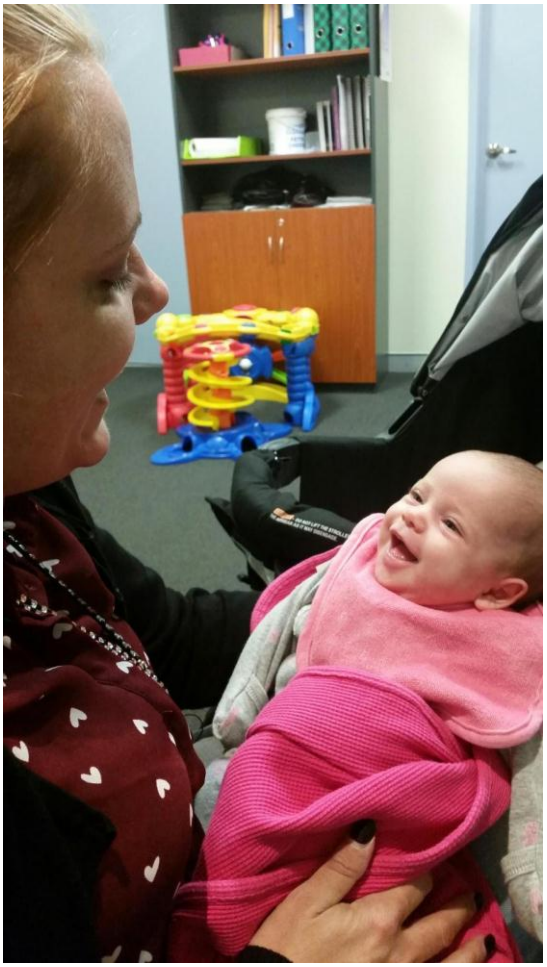
A number of other studies further emphasised the special position that ACCHSs occupy, which posits them in an optimal position to provide culturally appropriate antenatal care. Campbell and Brown's (2004) study for example concluded that "Aboriginal community-controlled health services are well placed to provide appropriate and accessible care to Indigenous women" (p. 376), due to ACCHSs are "based on a broad conception of health encompassing the emotional, cultural, social and physical needs of clients" (p. 380), as detailed earlier in this review.

Hunt (2006) details some of the main features of ACCHSs that makes them optimally placed for providing appropriate antenatal care:

- *being designed, staffed, operated and managed by Aboriginal women*
- *having a flexible appointment system*
- *providing free transport and child care for women who need them*
- *Aboriginal Health Workers having roles in caring for women being a 'woman-only' area on clinic days (some services)*
- *providing 'holistic' care—the whole woman not only her pregnancy, looking after children and family, and looking after the community*
- *having strong links with Aboriginal community members*
- *having an accepted, valued and well-developed role in advocacy and policy development."*

(Hunt, 2006, pp. 53-54)

In conclusion, this literature review provides an overview of some of the main accessible data on the provision and evaluation of antenatal care in an Aboriginal community context, focusing on the role of ACCHSs in the provision of antenatal care. The next chapter presents the detailed evaluation findings, crossed with the findings of the previous evaluation as well as NSW Aboriginal and Torres Strait Islander population and NSW general population data, for comparison and analysis.



Family support worker (Mums and Bubs) Tarryn Burson

3. Evaluation findings

3.1 Introduction and methodology

This section of the report consists of a comparative analysis of four data sets: Two data sets that were collected in the evaluation project (a clinical file audit and a survey), and data sets as presented in two reports for comparison: the Evaluation of the Daruk AMS Antenatal Program (1998) and NSW Mothers and Babies 2012 report (2014). The report is used both for general population and for Aboriginal and Torres Strait Islander population in NSW. The table below presents the different data sets used in this section.

Table 2: Details of data sets used in the evaluation

Data set	Short title used in tables	Relation to this project	Data period	Notes
Clinical file audit of AMSWS antenatal patients	Audit	Collected in the course of this evaluation project	January – December 2013	Audit of all 50 AMSWS patients who had an appointment with AMSWS antenatal GP and were pregnant.
Survey of AMSWS antenatal patients	Survey	Collected in the course of this evaluation project	December 2013 – December 2014	An in-depth survey of 21 patients of the AMSWS antenatal program.
Evaluation of the Daruk AMS Antenatal Program (1998)	1990-1996	Presented for comparison	1990 – 1996	The first evaluation of AMSWS (then-Daruk AMS) antenatal program. The data was accessed through the published report (Daruk AMS and Westerb Sector Public Health Unit, 1998).
NSW Mothers and Babies 2012 – Aboriginal and Torres Strait Islander population data	NSW Aboriginal	Presented for comparison	January 2012 – December 2012	General NSW antenatal data. The data was accessed through the published report (Centre for Epidemiology and Evidence, 2014).
NSW Mothers and Babies 2012 – general population data	NSW	Presented for comparison	January 2012 – December 2012	General NSW antenatal data. The data was accessed through the published report (Centre for Epidemiology and Evidence, 2014).

Data is presented by topic, for comparison. Each topic presents data from at least one of the core data sets for the project, and where possible, with other data sets for comparison.

The clinical file audit was conducted in the following process:

- Female patient that had been seen by Dr Wendy Thornthwaite (AMSWS antenatal GP) for pregnancy from 1 Jan 2013 and 31 Dec 2013. (Please note: while most of these patients used AMSWS antenatal program, a small minority of them did not use other services of the program).
- Files for non-Indigenous women were included if their child was recorded with Aboriginal identity.
- Files of pregnancies that were recorded as terminated were excluded.
- 50 files were audited.

The survey was conducted in the following process:

- The survey tool was jointly developed by all three teams working on the project (AMSWS Population Health Unit, AMSWS antenatal program, and Kirby Institute staff from the REACCH collaboration).
- Surveys were filled by patients at their home, when visited by AMSWS antenatal program staff between December 2013 and December 2014 for the post-birth visit. Participating patients were rewarded with gift vouchers.
- 21 AMSWS antenatal patients completed the survey.

The analysis for this section of the report was conducted in the following process:

- Clinical file audit and survey data sets were coded and compared with the external data sets to identify common themes and comparative data, as well as to identify data that was not comparable across other data sets.
- Data from different sets, grouped by theme, were tabled. Occasionally rates were recalculated to exclude missing data, to allow consistency across all data sets.
- Tables were divided into themes of the evaluation, which became the sections in the evaluation chapter of this report.

These are the main limitations of the study:

- Lack of a comprehensive qualitative component. When the project was planned it was projected that, in addition to the survey and the case file audit, in-depth interviews would be conducted with some of the AMSWS antenatal patients in 2015. AMSWS staff members were trained in a special workshop to conduct research interviews. However, due to the Federal Government's decision to cut AMSWS funding and effectively forcing it to close, this evaluation was forced to cut short. While most of the projected data collection was completed (surveys, file audit), the in-depth interviews did not take place. Qualitative interviews would have undoubtedly enriched this report, and would have been helpful in the process of meaningful interpretation of other data sets.

- Large variance of sample sizes. While AMSWS antenatal service case file audit has audited all 50 files of antenatal patients who used the service in 2013, the general population data that it is compared with is of a much larger scale: NSW Aboriginal and Torres Strait Islander 2012 data set is based on a population size of 3,348, and the NSW general population data set is based on a population size of 98,141. For each table in this section, both raw figures and rate are presented.
- Limitations related to the survey component. The survey participants include 21 AMSWS antenatal patients who agreed to participate in the survey during 2014. This sample may not be representative of the total population of AMSWS antenatal patients. Furthermore, the survey is based on self-reporting of the patients. Due to the limited sample size, where possible, audit data was preferred for comparison with the external data sets. However, the survey questions often covered topics that are not included in the other data sets.

3.2 Demographics

Table 3: Aboriginality status – mother

	Audit		Survey		1990-1996	
	Patients	%	Patients	%	Patients	%
Yes	45	90	19	90.48	223	91.02
No	5	10	2	9.52	22	8.98

The AMSWS antenatal program provides services to Aboriginal and Torres Strait Islander people who live in the service's catchment area, as well as partners of Aboriginal people and staff members. The ratio between Aboriginal and non-Aboriginal patients of the antenatal program remained similar throughout both evaluations.

Table 4: Aboriginality status – father

	Survey	
	Patients	%
Yes	14	66.67
No	7	33.33
NR[2]	0	-

No other database used in this evaluation includes any information regarding the father.

[2] NR is used throughout this section and represents missing data: No Response, not stated, or not known.

Table 5: Age – mother (years)

	Audit		Survey		1990-1996	NSW Aboriginal		NSW	
	Patients	%	Patients	%	%	Patients	%	Patients	%
19 and under	11	22	5	23.81	27	623	18.62	3162	3.22
20-24	19	38	8	38.1	31	2451	73.25	12694	12.93
25-29	9	18	4	19.05	22			26769	27.28
30-34	7	14	2	9.52	14			32385	33
35+	4	8	2	9.52	8	272	8.13	23114	23.55
NR	0	-	0	-	-	2	-	17	-
Average age	24.5		24.1						
Median	23		22						
Range	15-39		16-39						

The rate of mothers aged 19 and under in the Aboriginal population of NSW is over 5 times that of the general population in NSW (18.62% and 3.22%, respectively). Among AMSWS patients audited, that rate is even higher, with 22% recorded in the audit. The rates recorded during 1990-1996 were even higher, with 27% of mothers aged 19 and under.

Figure 1: Percentage of mothers aged 19 and under.

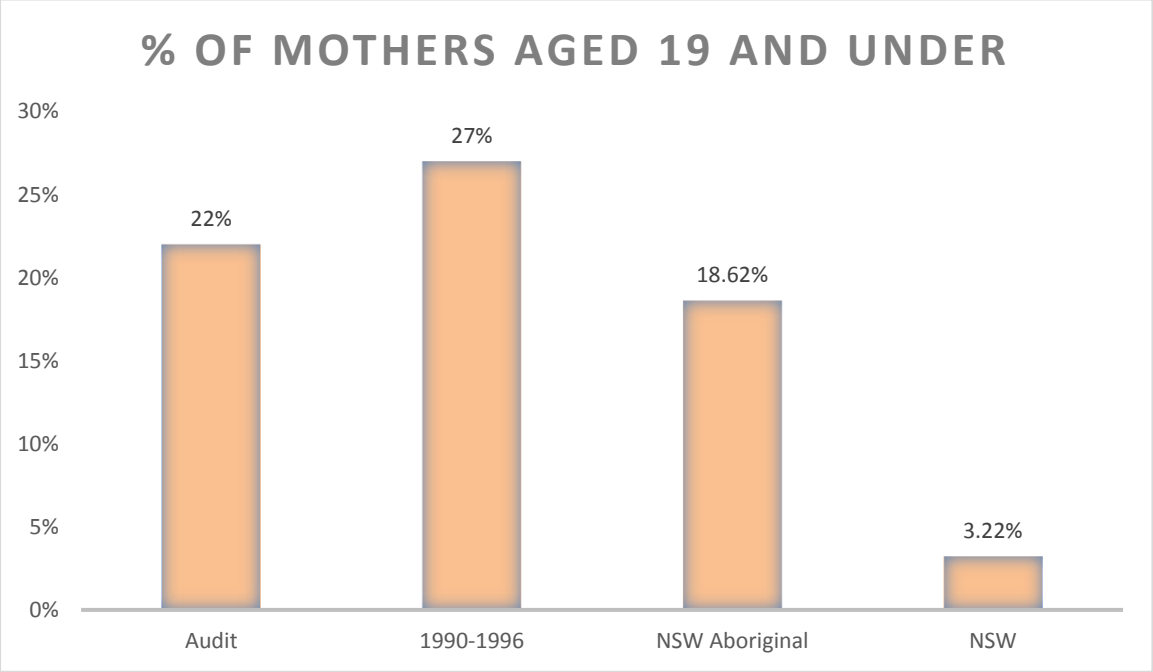
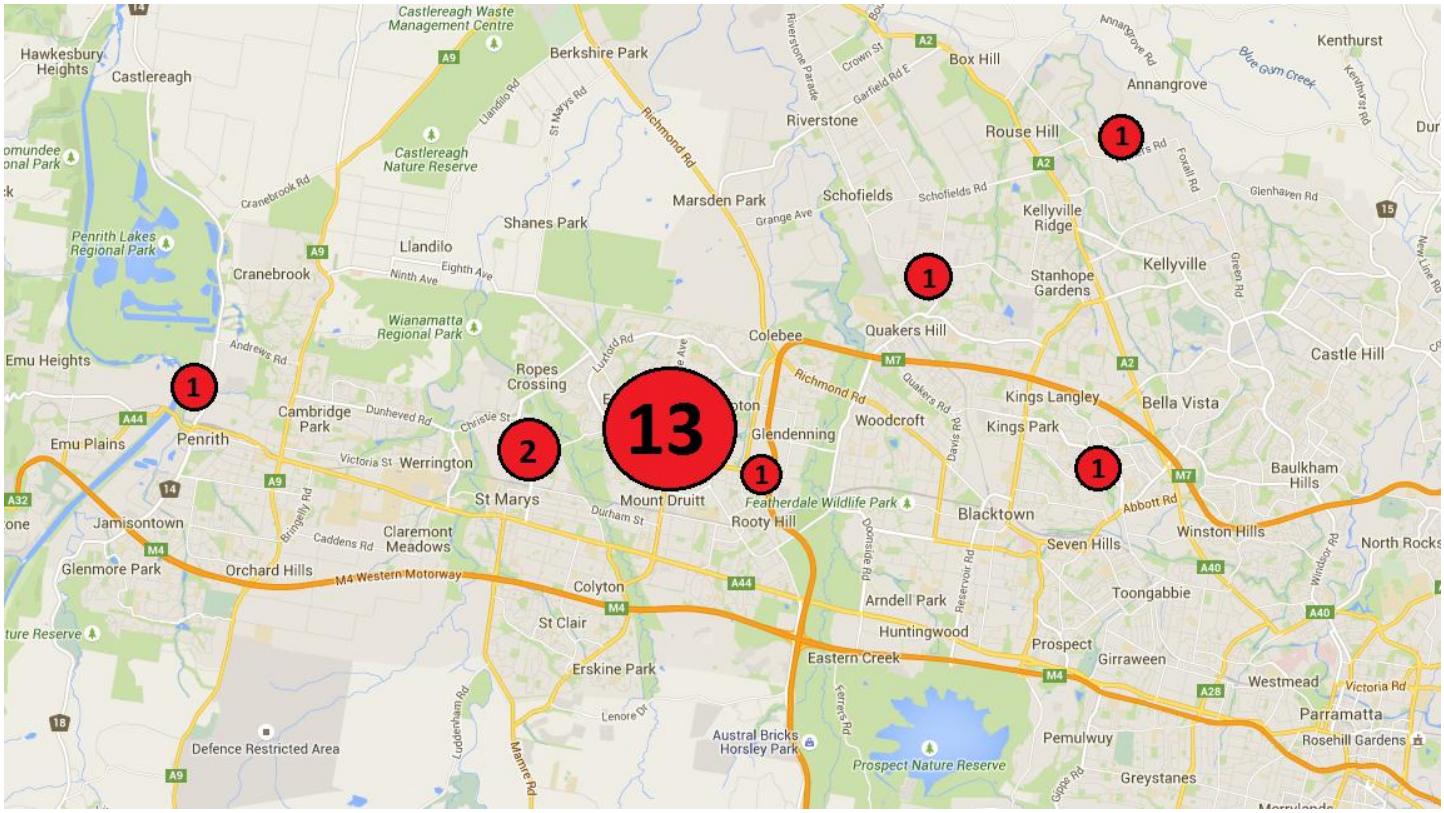


Table 6: Postcode of main residence

	Survey	
	Patients	%
2147	1	4.76
2155	1	4.76
2750	1	4.76
2760	2	9.52
2763	1	4.76
2766	1	4.76
2770	13	61.9
NR	1	4.76



(Map generated using Google Maps)

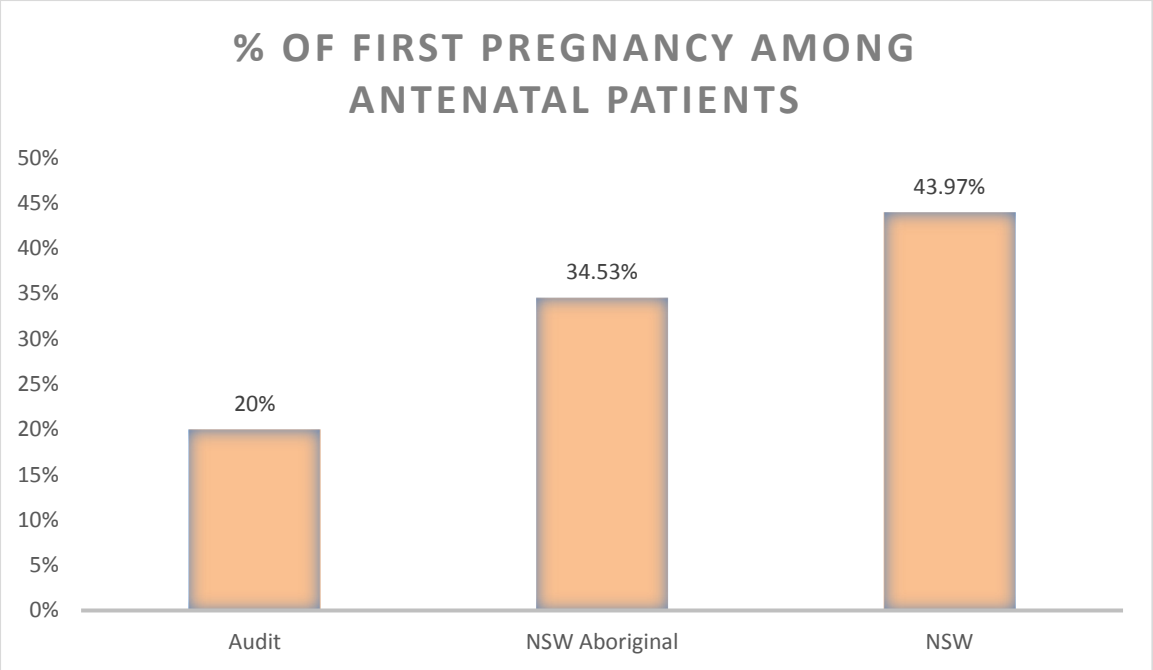
A large majority of patients surveyed live in the service's immediate vicinity (postcode 2770), while other patients travelled from different parts of Western Sydney. This may be an indication of a limited outreach, given the lack of appropriate funding for a needed growth of the service to match the growth in the Aboriginal population of the region.

Table 7: First pregnancy

	Audit		Survey		NSW Aboriginal		NSW	
	Patients	%	Patients	%	Patients	%	Patients	%
Yes	10	20	6	28.57	1156	34.53	43140	43.97
No	40	80	15	71.43	2192	65.47	54965	56.03
NR	0	-	0	-	0	-	36	Excluded

The rate of AMSWS patients audited for their first ever pregnancy (20%) is smaller than the rate of first pregnancy among all pregnant women in NSW (43.97%). It is also lower than the rate of first pregnancy among the Aboriginal and Torres Strait Islander population in NSW (34.53%).

Figure 2: Percentage of first pregnancy among antenatal patients



Another demographic data surveyed was primary language spoken at home. All of the patients surveyed indicated that English is the primary language spoken at home. The audit also did not find any evidence of language being a barrier to service delivery and accessibility at AMSWS.

3.3 The mother's direct environment

Table 8: Survey question: What is your current support network? (choose as many options as applicable)

	Survey	
	Patients	%
Immediate family	16	76.19
Partner	14	66.67
Extended family	7	33.33
Friends	7	33.33
Other (please specify)	3 • (AMSWS: 2) • (Nepean Family Neighbourhood Centre: 1)	14.29 (9.52) (4.76)
Number of support networks for each participant		
Indicated 2 or more	14	66.67
Indicated 1	7	33.33
Indicated none	0	-

Participants in the survey were asked to indicate what their current support networks are. It is of note that the immediate family had the highest response rate, with over 76% of participants indicating that their immediate family provides a support network. This is a higher rate than participants who indicated their partner as a support network (66.67%).

Two thirds of survey participants indicated two or more support networks, while none of the survey participants indicated no support networks at all. Two patients chose to specifically indicate AMSWS as one of their support networks.

Table 9: Main residency arrangement

	Survey	
	Patients	%
Home owner	1	4.76
Rent (private or public)	14	66.67
Living with relatives/ friends	4	19.05
Crisis accommodation/ refuge	2	9.52
Survey question: do you live with your partner?		
Living together	12	57.14
Have a partner but living separately	3	14.29
No partner	4	19.05
NR	2	9.52

Two thirds of survey participants indicated that their residency arrangement is rent-based (private or public housing). Most of participants live with their partner, while various other living arrangements were recorded – including living with friends/ relatives (19.05%), crisis accommodation or refuge (9.52%). Only one survey participant is a home owner.

Table 10: Survey question: Did you already have children in your care before the recent birth?

	Survey	
	Patients	%
Yes	12	57.14
No	8	38.1
NR	1	4.76

A majority of survey participants (57.14%) indicated that they already have children in their care before the most recent birth.

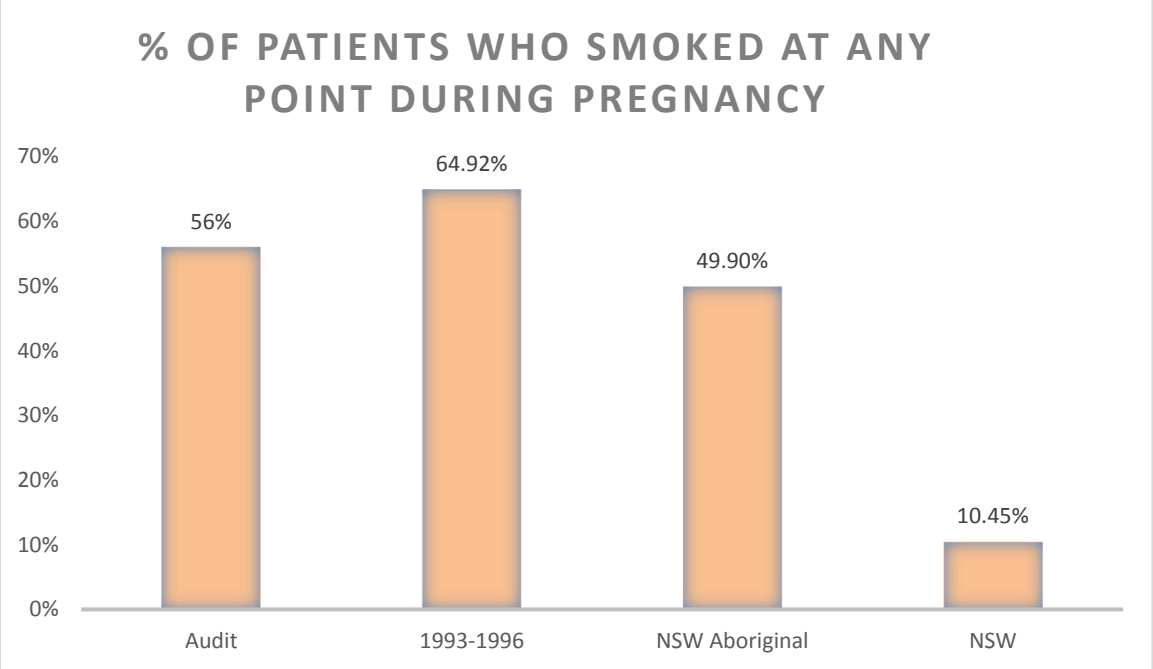
Table 11: Smoking during pregnancy

	Audit		1993-1996*		NSW Aboriginal		NSW	
	Patients	%	Patients	%	Patients	%	Patients	%
Yes	28	56	72	67.92	Raw data not reported	49.9	10225	10.45
No	22	44	34	32.08		50.1	87580	89.55
NR			93	Excluded			336	Excluded

* Data only refers to then-Daruk antenatal patients at Nepean and Blacktown hospitals, and smoking data is available from 1993 only.

Rates of patients who smoked at any time during their pregnancy among the Aboriginal and Torres Strait Islander population of NSW is significantly higher than general population data, almost 5 times larger (49.9% and 10.45%, respectively). Smoking rates during pregnancy among AMSWS patients audited are even higher (56%) compared with the general NSW Aboriginal and Torres Strait Islander population. This high rate is still lower than the rate recorded in the previous audit, which found a rate of over 67% of patients who smoked at any time during the pregnancy.

Figure 3: Percentage of patients who smoked at any point during pregnancy



3.4 Contact with services and accessibility

Table 12: Gestational age at first antenatal appointment

	Audit		Survey		1990-1996*		NSW Aboriginal		NSW	
	Patients	%	Patients	%	Patients	%	Patients	%	Patients	%
Up to 10 weeks	24	48	6	31.58	48	41.03	1707	51.9	60051	62.81
11-13 weeks	4	8	7	36.84						
14-20 weeks	14	28	4	21.05	50	42.74	703^	21.37 ^	21489^	22.48 ^
21-27	6	12	0	-			879^	26.73 ^	14063^	14.71 ^
28+ weeks	2	4	2	10.53	19	16.24				
NR	0	-	2	Excluded	82	Excluded	59	Excluded	2538	Excluded
Average	12.6		13.6		-	-	-	-	-	-
Median	11		12		-	-	-	-	-	-

* Data only refers to then-Daruk antenatal patients at Nepean and Blacktown hospitals.

^ NSW Aboriginal and NSW data categories are 14-19 and 20-plus

Attending an antenatal appointment during the first 13 weeks of the pregnancy is considered to be a major indicator for health outcomes for both the mother and the child. In the audit, 56% of patients attended their first antenatal appointment or a GP

appointment within the first 13 weeks. This is a significant improvement compared with 1990-1996 data (41.03%) and is higher than the general Aboriginal and Torres Strait Islander NSW population data (51.9%). However, it is still lower than the general NSW population data, which recorded 62.81% of pregnant patients attending their first antenatal appointment during the first 13 weeks of pregnancy.

Figure 4: Percentage of patients who attended first antenatal appointment before week 14

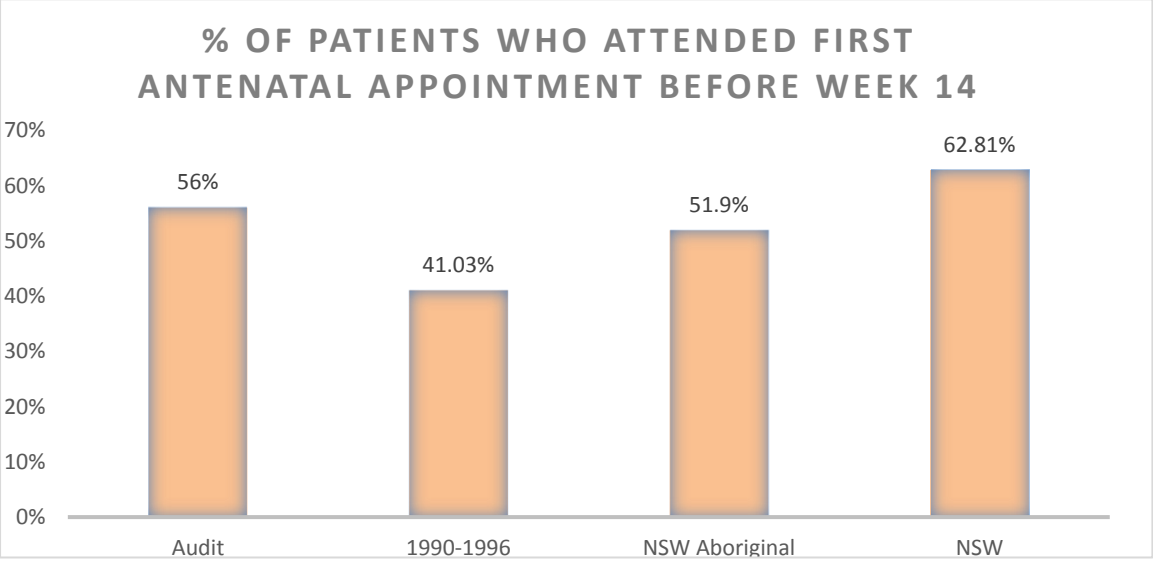


Table 13: Survey question: Where did you hear about the AMS's antenatal program?

	Survey	
	Patients	%
Was already an AMSWS patient	16	76.19
From family	3	14.29
From friends	1	4.76
From my GP	0	-
From the local hospital	0	-
NR	1	4.76

The large majority of survey participants (76.19%) indicated that they were existing AMSWS patients prior to using the antenatal program. Others have heard of the AMSWS Antenatal program from family and friends. None of the participants indicated that they have heard of the antenatal program from their GP or local hospital.

Table 14: Survey question: Did you use any other antenatal services this pregnancy, apart from the AMSWS antenatal program?

	Survey	
	Patients	%
Yes	2 – both Nepean Hospital	9.52
No	19	90.48

For the large majority of AMSWS antenatal patients, this is the only antenatal service that they utilise. This is a significant indication to the gap that may be left in this community if AMSWS (and the AMSWS antenatal program) ceases to operate.

Table 15: Survey question: Do you access the AMS for antenatal services only, or do you use other AMS services?

	Survey	
	Patients	%
Antenatal only	6	28.57
Other services	15	71.43

Following from the previous question, most participants (71.43%) indicated that they utilise other AMSWS services and programs, in addition to the antenatal services.

Table 16: Attending antenatal classes

	Survey	
	Patients	%
Yes	2	9.52
No	19	90.48
NR	0	-
If No, why not? Choose one or more		
No knowledge of classes offered and their times	3	15.79
No interest	13	61.9
Too busy with other children	2	10.53
I know what to expect	2	10.53
Inconvenient times, transport, peer pressure	0	-

Both of the patients who attended antenatal classes did so at Nepean Hospital. When asked to rate the classes' helpfulness on a 1 – 5 scale, participants awarded the sessions 4 and 5.

Table 17: Birthing hospital

	Audit		Survey		1990-1996	
	Patients	%	Patients	%	Patients	%
Nepean hospital	29	64.44	16	76.19	191	77.96
Blacktown hospital	12	26.67	3	14.29	26	10.61
Other (including hospitals and home)	4	8.89	2	9.52	28	11.43
NR	5	Excluded	0	-	0	-

Similarly with the data from the first evaluation of the program, the majority of AMSWS patients audited choose to deliver at Nepean hospital, but at a smaller rate (64.44% in the present audit compared with 77.96% for 1990-1996). The rate of patients who deliver at Blacktown hospital more than doubled compared with previous evaluation's data (26.67 compared with 10.61).

3.5 Attending AMSWS antenatal appointments

Table 18: Transportation to antenatal appointments

	Audit*		Survey^	
	Patients	%	Patients	%
AMS/ Antenatal transport service	27	54	13	61.9
Car (I drive)	-	-	7	33.33
Car (someone else drives – friends/ family)	-	-	2	9.52
Public transport	-	-	2	9.52
Walking			1	4.76

* Audit only included record of using AMS/ Antenatal transport service

^ Participants could indicate one or more

The use of AMSWS' transportation service (either the general AMSWS transport or specific antenatal program transport) is very high, and was utilised by more than half of the patients in both the audit (54%) and the survey (61.9%).

The transportation services at AMSWS are integral to the wholistic approach to the service. In an area with an underdeveloped public transport network and lower rates of car ownership, people are likely to skip medical appointments due to travel times and costs. By providing free transport for patients door to door, AMSWS is ensuring proper accessibility and a high utilisation rate.

Table 19: Survey question: Did you ever miss an antenatal appointment at the AMS?

	Survey	
	Patients	%
Yes, most appointments	0	-
Yes, some appointments	6	28.57
No	15	71.43
If answered "Yes", what are the reasons?		
Couldn't take time off work	2	33.33
Distance	1	16.67
AMS/ Antenatal transport service unavailable	1	16.67
Cost of travel	1	16.67
No appropriate child care	1	16.67

Most survey participants (71.43%) indicated that they never missed an antenatal appointment. Those who did miss some appointments indicated reasons including inability to take time off work, lack of appropriate child care, or that the transport service was unavailable and distance/ cost of travel may then also become barriers.

Table 20: Survey question: Did you ever leave prior to your appointment because of waiting times?

	Survey	
	Patients	%
No	18	85.71
Yes, but rarely	2	9.52
Yes, often	0	-
NR	1	4.76
Estimated average waiting time		
Average	15.9 min	
Median	12.5 min	
Range	2 min – 50 min	

While most patients never left prior to their appointment because of waiting times, when survey participants were also asked whether there any areas of the antenatal service that they would like to see improved, some participants commented on the waiting times and waiting area. The answers included: suggestions for fresh food and water in the waiting area; more staff members; and improved waiting times.

Given the increase in the Aboriginal population in the area, a substantial expansion of AMSWS antenatal program could have increased the service's capacity to support a larger number of women and families, and at the same time possibly help reduce waiting times. However, funding for the program remained stagnant for years, and the program is now at risk.

3.6 Birth outcomes

Table 21: Type of birth

	Audit		1990-1996*		NSW Aboriginal		NSW	
	Patients	%	Patients	%	Patients	%	Patients	%
Normal vaginal	31	72.09	159	80.3	2256	67.4	55993	57.06
Caesarean	11	25.58	27	13.64	844	25.22	30558	31.14
Assisted ^	1	2.33	12	6.06	247	7.38	11572	11.79
NR	7	Excluded	5	Excluded	1	Excluded	18	Excluded

* Data only refers to then-Daruk antenatal patients at Nepean and Blacktown hospitals.
^ Including forceps, breech, vacuum extraction, and other assisted births.

AMSWS patients audited have a higher rate of normal vaginal births (72.09%) compared both with NSW Aboriginal population (67.4%) and the NSW general population (57.06%). However, it is less than the rate of normal vaginal birth of then-Daruk AMS patients from 1990 – 1996 (80.3%).

Rates of caesarean section births among AMSWS patients audited is almost identical to NSW Aboriginal and Torres Strait Islander population data (25.58% and 25.22% respectively). This is a significant rise compared with 1990-1996 data (13.64%), which may reflect in part policy changes regarding the establishment of breech deliveries. The rates are lower compared with NSW general population data (31.14%).

Figure 5: Type of birth

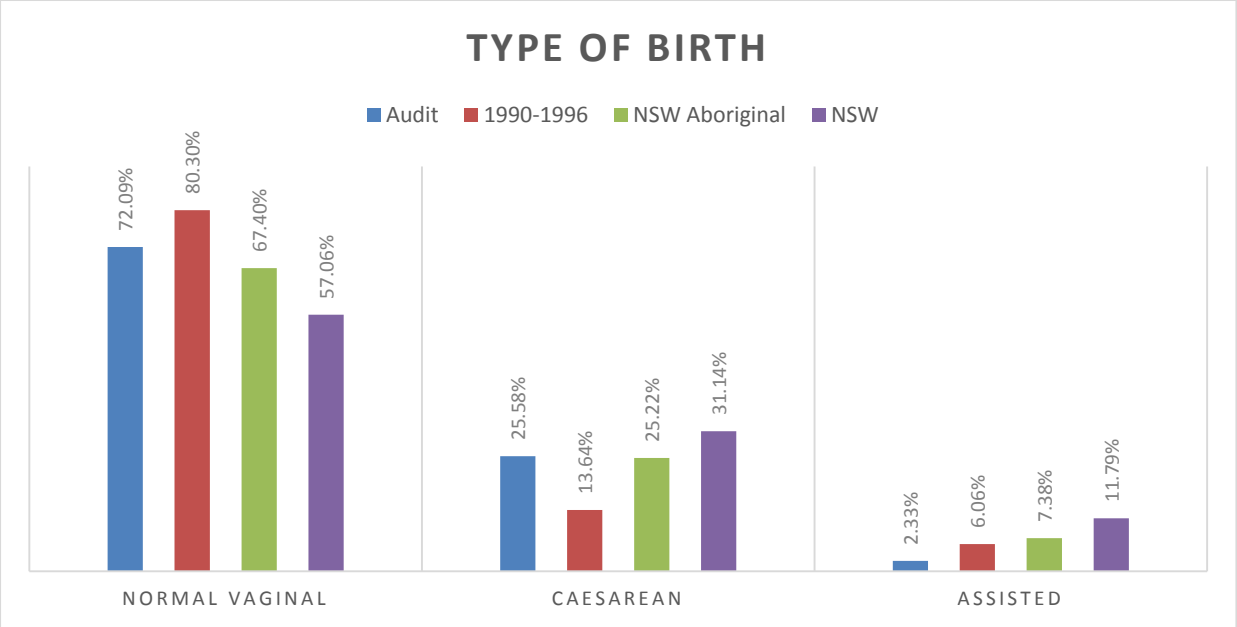


Table 22: Gestational age at birth

	Audit		1990-1996*		NSW Aboriginal		NSW	
	Patients	%	Patients	%	Patients	%	Patients	%
36 weeks and under	8	17.39	16	7.88	450	13.24	7549	7.59
37 weeks and over	38	82.61	187	92.12	2948	86.76	91957	92.41
NR	4	Excluded	0	Excluded	1	Excluded	4	Excluded

* Data only refers to then-Daruk antenatal patients at Nepean and Blacktown hospitals.

Gestational age at birth is considered to be a significant health indicator. AMSWS patients audited recorded a higher rate of preterm birth (gestational age of 36 weeks or under at birth) compared with all other data sets, with over double the rate of the general NSW population. It also more than double the rate recorded in the previous evaluation.

Figure 5: Gestation age at birth

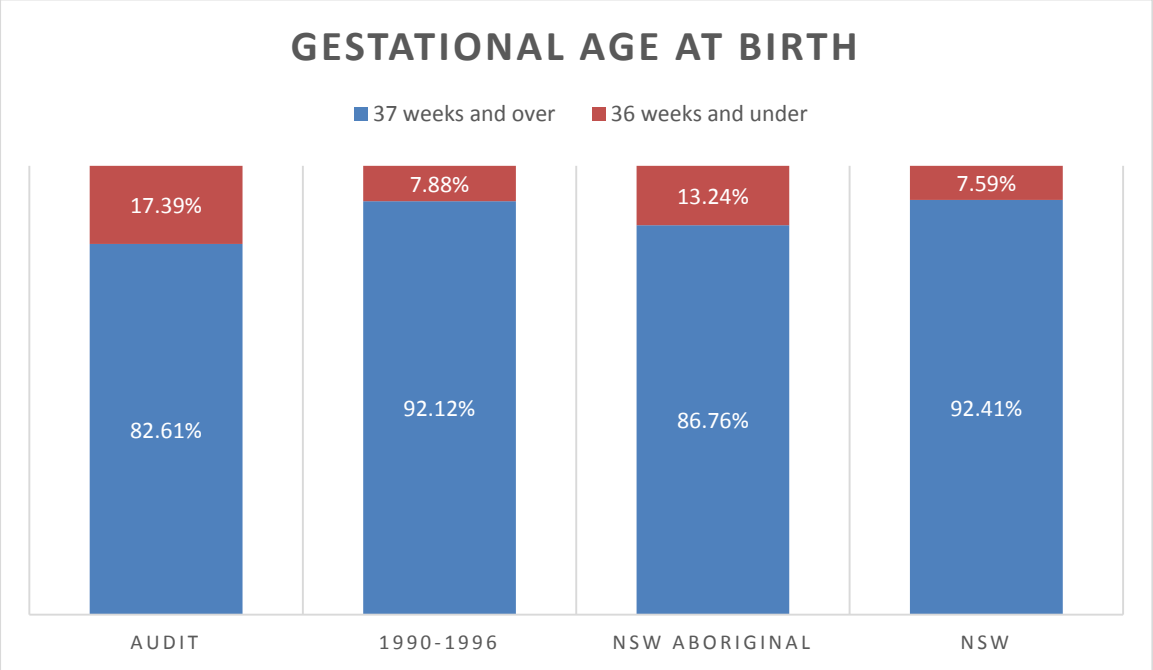


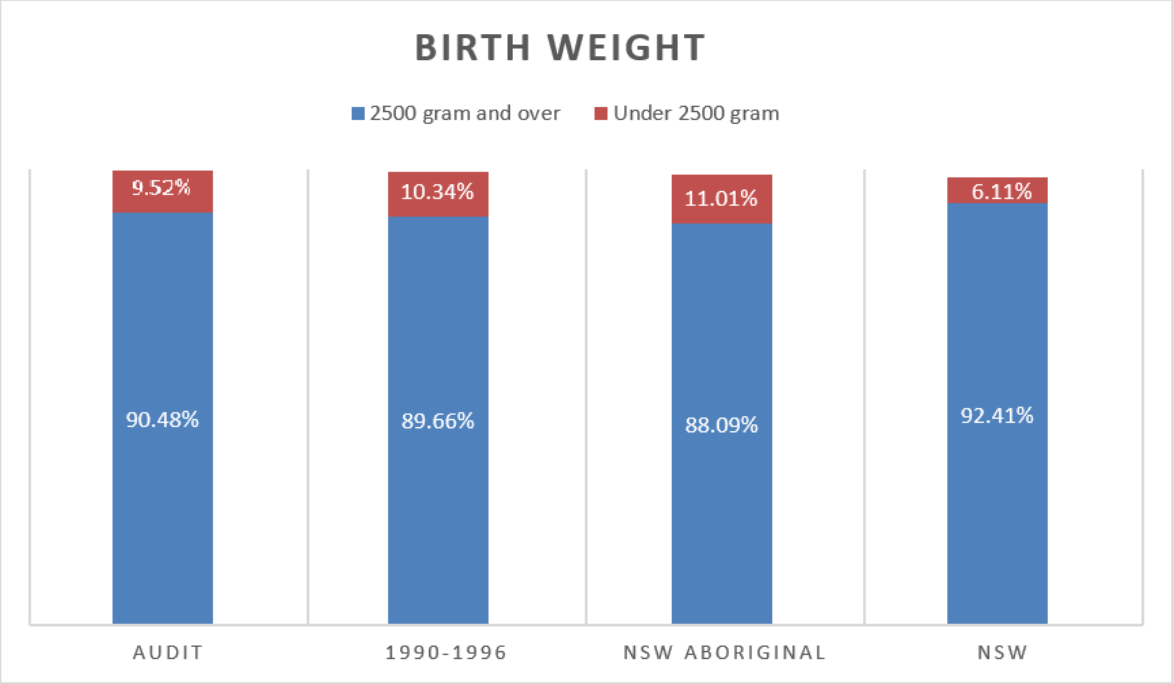
Table 23: Birth weight

	Audit		1990-1996*		NSW Aboriginal		NSW	
	Patients	%	Patients	%	Patients	%	Patients	%
Under 2500 gram	4	9.52	21	10.34	374	11.01	6081	6.11
2500 gram and over	38	90.48	182	89.66	3022	88.99	93363	93.89
NR	8	Excluded	0	Excluded	3	Excluded	66	Excluded

* Data only refers to then-Daruk antenatal patients at Nepean and Blacktown hospitals.

Birth weight is another major health indicator for newborns. AMSWS patients audit revealed that over 90% of births resulted in a delivery of a baby weighing 2500 grams or over, a slight improvement compared with both 1990-1996 audit data and NSW Aboriginal and Torres Strait Islander population data. NSW general population rates are still higher though, setting a benchmark for future improvements.

Figure 6: Birth weight



3.7 Patients evaluation of AMSWS antenatal program

Table 24: Participants rating of AMSWS staff on various topics on a 1 – 5 scale (5 being excellent)**.**

	Survey
	Average
Knowledge about babies and giving birth	4.95
Interested in me and my baby	4.85
Understand my particular needs	4.9
Willing to go out of their way to help	4.9
Friendly	4.85
Non-judgemental	4.8

Survey participants were asked to rate AMSWS antenatal program staff on a range of topics. All of the questions received very high scores.

Table 25: Survey question: Did you get clear advice on the following topics in relation to your pregnancy?

	Survey	
	Patients	%
Food (good food/ food to avoid)	16	76.19
Taking folate and other pregnancy supplements	16	76.19
Smoking	15	71.43
Contraception	14	66.67
Pain relief during labour	14	66.67
Smoking around the baby	14	66.67
Drinking alcohol	13	61.9
Yarndi (Marijuana) and other drugs	13	61.9
Medication	13	61.9
Immunisation of the child	13	61.9
Breastfeeding	13	61.9
Postnatal care (caring for self and baby in the first 2 months)	13	61.9
Exercise	12	57.14
Immunisation of the mother	12	57.14
How to put your baby to bed	11	52.38

Survey participants were asked whether they received advice on the following topics. All of the topics were discussed with over half of the survey participants. This gives some indication to the educational element in the complex role of the Aboriginal maternal health worker and the midwife.

Table 26:Confidence at birth and general evaluation of AMSWS antenatal program

	Survey
	Rate (1-5 scale)
Did you feel well-prepared for the birth?	4.38
In general, does the AMS Antenatal service meet your needs?	4.86

Most survey participants rated their own preparedness for birth as high, while patients who were prepared for their first birth rated their own feeling of preparedness slightly lower than other participants. Almost all participants gave AMSWS antenatal program a very high general score, in line with the high scores on particular topics, which was presented earlier.

When asked what would they like see changed in the antenatal program, most participants did not provide detailed answers. Most participants simply answered with “nothing” and “The AMS antenatal service is great the way it is”. The few suggestions that were received made suggestions regarding the waiting area and requested to increase staff numbers, as detailed earlier.

Finally, participants were asked whether they have anything else to say about the AMS’s antenatal services. While most participants left this section blank, the answers that were received are presented below.

- *"The AMS antenatal staffs are very friendly & helpful. I would recommend the AMS antenatal service to any aboriginal pregnant women around the Community."*
- *"all the staff are wonderful"*
- *"Thanks for taking me on board and making sure me and my child health and safety"*
- *"Great service helps any way/ ways possible."*
- *"Always helpful and great service"*
- *"I loved the friendly ladies, they were willing to listen & help where I needed it. Overall I am very happy with the service at the AMS Antenatal and will definitely use the service again. :) "*
- *"No but they are very good, great services."*
- *"everyone at the AMS is very friendly and helpful."*

4. Conclusion

Comparative analysis of the 5 data sets, as presented in the previous chapter offers insight into the complex reality of the AMSWS antenatal program. On some parameters, improvement can be traced from the first evaluation to this current one, as well as better outcomes compared with the general Aboriginal and Torres Strait Islander population of NSW. The indicators of the general population in NSW helps anchor some of these findings as well, and these often serve as a reminder of the significant gap that still exists between Aboriginal and non-Aboriginal antenatal health.

Below are some of the significant insight that emerges from the data sets:

- Aboriginal mothers are significantly more likely to be in their teens compared with non-Aboriginal mothers in NSW, and AMSWS antenatal patients are even more likely to be in their teens compared with general Aboriginal and Torres Strait Islander population in NSW. The rate of mothers aged 19 and under among birthing mothers in the NSW general population is only 3.22%, which is over 5 times smaller than the Aboriginal and Torres Strait Islander NSW rate (18.62%), and almost 7 times smaller than the rate for AMSWS antenatal patients (22%).
- While audited AMSWS patients are younger, they are also less likely be experiencing their first pregnancy (20%) compared with general NSW Aboriginal and Torres Strait Islander data (34.53%) and NSW general population data (43.97% of patients were in their first pregnancy).
- Rates of smoking during pregnancy among AMSWS antenatal patients (56%) have declined since the first audit (67.92%), however it is still higher from the general NSW Aboriginal and Torres Strait Islander population data (49.9%). The equivalent rate in NSW general population data is significantly lower (10.45%) and provides another indication to the persisting significant health gaps.
- In this context, it is encouraging to see the high rate of AMSWS antenatal patients who attend their first appointment before week 14 (56%). This rate is significantly higher than the equivalent rate in the first evaluation (41.03%) and the general NSW Aboriginal and Torres Strait Islander population data (51.9%).
- The “typical” AMSWS antenatal patient was an existing AMSWS patient before accessing the antenatal program, and is unlikely to utilise other antenatal services or to attend external antenatal classes. Most antenatal patients rely on the transport service to attend antenatal appointments, and most have never missed an appointment. This is an indication to the importance of this program, and the unique role it plays in providing essential antenatal care.

- Birth outcomes of AMSWS antenatal program patients show mixed results. AMSWS antenatal patients were more likely to experience a normal vaginal birth compared with NSW Aboriginal and Torres Strait Islander population data as well as NSW general population data. Furthermore, in terms of birth weight, AMSWS antenatal program patients recorded slightly higher rate of newborns whose birth weight is 2500 gram and over compared with the previous audit as well as the NSW Aboriginal and Torres Strait Islander population data. However, AMSWS antenatal program patients had a significantly higher rate of preterm birth (17.39%) compared with the first evaluation (7.88%), NSW Aboriginal and Torres Strait Islander population data (13.24%), and NSW general population data (7.59%).
- AMSWS antenatal program patients rate the program very highly, and generally feel well prepared for birth. Furthermore, the program's model of care and related services offered are highly compatible with the list of Common features of successful, documented Aboriginal-specific maternal and child health programs (Herceg 2005; quoted in: Hunt 2008) which are detailed in the Literature Review chapter.

The impending loss of the Aboriginal Medical Service Western Sydney and all of its existing programs, including the antenatal program, may add to the already significant health inequity of the Aboriginal community of Western Sydney. This evaluation reveals some aspects of this burden, and shows the significant role this service plays in the lives of patients. At present no other service in the area can offer this wide variety of services to pregnant women in such an accessible manner.

It is our hope that the AMSWS antenatal program will manage to survive, and will continue to evolve, as it has done since its inception in 1990. However, such a program cannot be delivered as a stand-alone service, because the integration of the antenatal program within AMSWS is one of its significant strengths, as it offers continuity of care via different programs based on ever-changing needs of patients. Without this connection to a wider variety of programs, the wholistic element of the program will be lost, which will have a significant effect on the health of pregnant women in the community and their children.

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