Supporting high-risk maternity services in rural NSW

Ruth Daniels1, Lyn Boylan2, Maryanne Hethorn3
1NSW Ministry of Health, 2Hunter New England Local Health District, 3Consultant Assisting NSW Ministry of Health with MSOAP

Background

The Medical Specialist Outreach Assistance Program (MSOAP) was established in 2000 as part of the Australian Government’s Rural Health Strategy to improve rural and remote community’s access to specialist outreach services. In NSW funding is split between the NSW Ministry of Health for public sector services and NSW Rural Doctors Network for private sector services. In 2009, MSOAP was expanded to include multidisciplinary outreach teams in Indigenous Chronic Disease and further extended in 2010/11 to include Maternity Services to focus on service delivery in outreach rural locations to improve access to antenatal and postnatal care locally, better health outcomes for women and their babies; and to increase access to outreach maternity services. There was a significant increase in the number of services supported by MSOAP for NSW Health rising from 61 in 2011/12 to 89 in 2012/13, equating to an investment of over $680,000.

MSOAP, as the name indicates, is an ‘assistance’ program which provides funding for travel, accommodation, clinic administration and clinician backfilling. The funding does not cover all expenses associated with conducting the outreach service, however the additional costs such as coordination or corporate on-costs are met by the Local Health District. This paper will focus on one of the projects approved in the first year of the MSOAP Maternity program established to deliver a High Risk Maternal Foetal Medicine Service (MFMS) in Moree in north west NSW.

Moree Hospital provides obstetric care for a large geographic catchment. Twenty percent of the population is of Aboriginal descent who represent 30% of births in 2010. Presently care is provided by 5 GP Obstetricians and shared care midwife clinics. Geographical isolation, no local specialist resources to care for mid to high risk obstetric patients and a low socioeconomic profile making long distance travel to/from the tertiary hospital difficult are some of the reasons why this outreach service was deemed necessary.

Methods

The original project scope was to establish an outreach clinic, supported by staff from the Newcastle John Hunter Hospital including a maternal foetal medicine specialist, social worker, neonatal intensive care clinical nurse specialist ultrasonographer and the Aboriginal Maternal Infant Health Service (AMIHS) Manager. However when the clinic commenced, not all of the health professionals were available given workforce constraints. As an alternative, social work support was negotiated with the oncology social worker located in Moree. Due to concerns with transporting ultrasound equipment it was decided to use the local private service in Moree for the ultrasonography service. This proved beneficial for both the women and the MFM team as previous scans, could be reviewed, women were also familiar with the local sonographer and knowledge could be shared to ensure the best foetal and maternal views and outcome for women and their babies. Support by the local AMIS health care workers was also required to facilitate early access to antenatal services and ensure continuity of care for women during their pregnancy. This support often includes the need to address transportation issues to/from Moree, Wee Waa and Narrabri.

Results

The Service commenced in February 2012 with 1 day outreach clinics held every six weeks with 10 visits per annum. A charter flight is taken from Newcastle to Moree with the visiting team from John Hunter Hospital consisting of: a Maternal Foetal Medicine Specialist; O&G senior Registrar; Clinical Midwifery Consultant-High Risk (CMC), and supported by the local Moree team members including a
midwife from Moree District Hospital; the ultrasonographer from the private contractor in Moree; and a local Aboriginal Health Education Officer.

During the Clinic, clients are consulted by both the CMC and local midwife who gather a health, previous pregnancy and ante natal history. In addition they conduct a full ante natal check including a blood pressure, weight, urinalysis, fundal height and devise a birth plan in which relevant medical history, medications, current health and previous health or pregnancy issues are highlighted. Women are then introduced to the Fetal Medicine Specialist, visiting O&G Registrar and the sonographer. The Birth Plans are revised or devised by the MFM specialist and copies provided to the woman, the booking maternity unit, and to the local referring GP. Any additional appointments and referral are also made, for example, referral appointment to the regional centre where birthing is expected to occur.

There are 10 outreach clinics approved for Moree each year and since the February 2012 68 women have been seen, with each woman having an average of 2 visits (range 1-5 per woman). The age of the women presenting to the clinic was 17-43 years (average 28 years). Aboriginal women comprised 36.8% (n=25) of the presentations). Gestation at presentation ranged from 10-39 weeks (average 27.5 weeks). Clinic attendance rate was extremely high and despite the travel requirements for many women, there were only two no-shows in the first 12 months.

Many women were required to travel quite some distance in order to access the high-risk outreach service:

- 50 women from Moree and surrounding area up to 50-100kms
- 11 Women from Narrabri and 3 from Wee Waa which are over 100kms south/south west of Moree
- 1 from Collarenebri (over 100kms west of Moree)
- 3 not specified.

Clinicians utilised available technology to assist in the continuity of service provision. For the John Hunter team were unable to take their flight due to poor weather conditions. Rather than cancel the outreach clinic the local sonographer and midwife performed the ante natal checks and scans for the women who attended the clinic. These results were then uploaded into our web based reporting tool so that the Newcastle based specialists could results ensuring timely continuity of planning and care.

**Presenting conditions**

There were a range of conditions for which the women were referred to the clinic including

- gynaecological complications (cervical incompetence; CIN 1,2 or 3; Bicornate uterus; vaginal prolapse; previous caesarean (LSCS); requesting vaginal birth after caesarean (VBAC)
- endocrine conditions (gestational Diabetes; Type 1 Diabetes; and hyperthyroid)
- haematological concerns (clotting disorder and spherocytosis)
- antibody identification
- neurological history(VP Shunt and Epilepsy)
- other conditions for which women were referred include autoimmune disease; musculoskeletal concerns; cardiac history; PET in previous pregnancies; psycho- social issues; mental health issues; drug and alcohol issues; and BMI over 38.
There were also foetal concerns that initiated the referrals to the clinic. These included:

- twins
- hydronephrosis
- interuteren growth restriction
- FDIU: previous pregnancy
- four or more miscarriages
- previous neonatal death
- previous premature birth
- abdominal cyst on foetus
- foetal abdominal ascites
- abnormality identified on USS
- foetal pyelectasis
- previous pregnancy cardiac abnormality
- amniocentesis
- family congenital abnormality.

When it was determined that the care required by the woman or her baby would exceed the capacity of the local services, referrals were made to a regional or tertiary referral hospital depending on the level of care required. This included Tamworth Base Hospital for Special Care Nursery support; John Hunter Hospital for Neonatal Intensive Care; and referral from Narrabri to Moree for maternal care such as VBAC and Epidural; or to one of the tertiary level maternity services in Sydney.

Figure 1 below describes the birth outcomes from women attending the clinics:

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>39 were able to birth at their local maternity unit</td>
<td>(Moree or Narrabri) including 1 set of twins who birthed at Moree and were able to remain until discharge.</td>
</tr>
<tr>
<td>28 referred to higher care facility for birth</td>
<td>including 1 premature birth in Collarenebri hospital - retrieved by NETS to tertiary facility.</td>
</tr>
<tr>
<td>1 chose to birth elsewhere</td>
<td></td>
</tr>
</tbody>
</table>

The approved value of the project is just over $100,000. Workforce surveys continue to show that both rural GP obstetricians and midwives are aging. The specific challenge in rural settings is succession planning. Support from speciality services, not only support the contemporary workforce of rural GP Obstetricians and midwives working in rural areas, but may act as a recruitment tool, offering specialist hospital staff insight into opportunities available in rural settings. A shared care approach to care that keeps women and their babies local whenever it is safe to do so ensures viability of rural maternity services. Importantly, delivery of the outreach High Risk Maternal Foetal Medicine Service for rural women with maternal or foetal issues in pregnancy results in better access to a specialist service closer to home, and less economic and social stress for these women and their families.
Education sessions
The MFMS team also provided lunchtime education sessions attended by local GP obstetricians, midwives, radiographer, AMIHS, Child and Family Health nurses for the purpose of education. The meeting is also teleconferenced to Narrabri to enable staff to attend. Some of the topics have included VBAC, use of epidurals, malposition at birth, cephalic rotation; Evidence based support for analgesia use in labour; Foetal growth monitoring in utero, highlighting concerning features. Necessary interventions; Maternal cervical length monitoring and treatment; prevention and treatment of premature labour; and Autoimmune disease in pregnancy. The education provided to the local clinicians has been extremely favourably received.

Key messages
The MSOAP High Risk Maternal Foetal Medicine Service has enabled the provision of a specialty service locally, supporting both the local rural community as well as the local GP and maternity workforce. Whilst MSOAP Maternity in its current form will cease on 30 June 2013 funding for similar Maternity outreach services will be offered under the new Department of Health and Ageing Rural Health Outreach Fund (2013-2016). Other rural maternity services are encouraged to consider what innovative service models they could establish to deliver complex care locally and safely.