

MATERNAL AND PERINATAL SERVICES

CHAPTER 3

3.1 MATERNITY

SWSAHS has the highest number of births of any Area Health Service in NSW with 12,658 births in 2002. SWSAHS makes up about 14.4% of the births in NSW (MDC 2002).

The population of women of childbearing age in SWS is projected to remain relatively stable to 2011, despite overall population growth. Hence the total demand for obstetric services is expected to remain relatively unchanged, with only a 3.4% increase in demand forecast to 2006 and a further increase of 2.7% forecast to 2011.

38.1% of SWS women giving birth were born outside Australia in a non-English-speaking country, with the majority coming from South-East Asia 14.3% or the Middle East (10.2%). Aboriginal births made up 0.8% of total births (MDC 2002).

Overall, in 2002, SWSAHS hospitals reported low intervention rates compared to other Health Areas, with more women having normal vaginal deliveries (71.1%) than the state overall (65.4%). SWSAHS has the lowest rate of caesarean section in the state (18.9% of all births). 50.6% of births in SWS hospitals were spontaneous. Epidural pain relief was reported in only 14% of confinements in SWS compared to 29.8% across the state. Interventions and pain relief was significantly more prevalent in the private hospitals in SWS. Epidural pain relief rates ranged from 5.5% of births at Fairfield to 25.6% at Bowral and 25.8% at Sydney Southwest Private Hospital. 98.1% of SWS women had their babies in a hospital, with only 1.2% having their babies in a birth centre and only 0.1% having their babies at home. In SWSAHS the average length of hospital stay reported was 3.1 days, which is lower than the state average of 3.7 days and is considerably lower than other metropolitan Areas (MDC 2002).

6.7% of SWSAHS babies had low birthweight (less than 2,500 grams) compared with 6.4% in the state. 98.9% of SWS babies survived. The perinatal mortality rate for SWS was 10.7 per thousand as compared to 9.2 for the state. 88 babies were stillborn, a further 44 died as neonates.

Current Service Provision

Maternity services are provided in hospitals and community health centres across SWSAHS. Each local maternity service has developed services based on local need and resources, with the emphasis being placed on Families First and the supportive linkages that this program provides to prevention, early intervention and community networks. Inpatient obstetric services are provided in each local SWS hospital, with the tertiary referral service being provided at Liverpool. Each hospital has a domiciliary midwifery program. Each community health centre has primary health nurses, Child and Family Health Teams and Family Care Cottages charged with the provision of primary and secondary continuing maternal and infant assessment, care, counselling and support. General Practitioners have a central role either through shared care programs (overall utilisation of this option is 23% of pregnancies) or through ongoing maternal and infant medical care. The Ethnic Obstetric Liaison Officer Program provides specialist assistance to women who do not speak English. Karitane is based at Fairfield and provides a residential family care unit, a specialized post-natal depression service and the Liverpool Family Care Cottage.

Inpatient Maternity Services

All six public hospitals in SWSAHS provide maternity services, with most SWSAHS women choosing to deliver at their local public hospital. In 2001/02 SWSAHS delivered 12,507 episodes of care in obstetrics, accounting for 37,485 beddays, thereby meeting 87% of total public sector demand for obstetric services. The private sector captured 16% of total demand. Of the total obstetric outflow from SWSAHS 35% was to WSAHS, 30% to CSAHS and 21% to SESAHS.

Table: Inpatient Maternity Services in SWSAHS

| Sector Health Service | Number of Births in the Hospital in 2002 | Maternity Role | Number of Beds | Neonatal Role | Available Neonatal Beds |
|-----------------------|--|----------------------|----------------|---------------|-------------------------|
| Macarthur | 2,673 | Level 4 Campbelltown | 22 | Level 4 | 20* |
| | | Level 3 Camden | 10 | Level 2 | 2 |
| Fairfield | 1,868 | Level 4 | 34 | Level 3 | 9 |
| Liverpool | 3,000 | Level 6 | 38 | Level 6 | 23 |
| Bowral | 617 | Level 3 | 12 | Level 2 | 2 |
| Bankstown | 1,853 | Level 4 | 20 | Level 3 | 10 |
| TOTAL | 10,011 | | 136 | | 66 |

Source: PIRS 2002/03.

Bankstown Hospital

Bankstown Hospital has 20 level 4 beds and 10 level 3 neonatal beds. The hospital had 1,853 births in 2002/03. The inpatient service is 88.16% occupied. The Bankstown Hospital captures 64 % of the Bankstown births. Major outflows were to RPA (8%), Canterbury (7%) and St George Hospitals (5%). Bankstown provided 14,769 antenatal occasions of service and 38 antenatal groups in 2002/03. The hospital reported 4,166 Domiciliary Midwife Program occasions of service.

Fairfield Hospital

Fairfield Hospital has 34 Level 4 maternity beds and 9 Level 3 neonatal beds. The hospital had 1,868 births in 2002/03. The 34 beds reported 57% occupancy in 2002/03. The SRG Obstetric (which includes reasons for hospitalisation other than a birth) indicates that Fairfield Hospital provides for 62% of the obstetric needs of the local government area. Liverpool provides a further 26% and western Sydney Hospitals a further 8% of obstetric services. Fairfield and Liverpool together provide for 88% of the obstetric inpatient services demanded by the Fairfield population.

Fairfield has 9 nursery beds with an average of 468 babies (509 episodes of care in 2000/01) admitted per annum. This accounts for 23% of total births. Fairfield Hospital reported 3,321 occasions of service in its domiciliary midwife program.

Liverpool Hospital

Liverpool Hospital has 30 Level 6 postnatal beds and 8 Level 6 antenatal beds. It has 23 Level 6 neonatal beds. The hospital had 3,000 deliveries in 2002/03. The occupancy in the 30 postnatal beds was 71% in 2002/03.

Liverpool Hospital captures 80% of the Liverpool public obstetric activity. A further 7% is captured by Fairfield, 2% by Campbelltown and 2% by Westmead Hospital. The hospital reported 1,269 domiciliary midwife occasions of service.

Liverpool Hospital Feto-Maternal Service is an Area-wide service to monitor high-risk pregnancies. It provides outpatient and day only assessments prenatally for babies at risk. The Feto-Maternal service reported 5,120 non-inpatient occasions of service in 2002/03. The service requires greater medical and nursing staffing in order to provide a more decentralized service model in association with radiology.

The tertiary Clinical Genetics Service reported 732 outpatient occasions of service in 2002/03. The Area-wide Service provides pre-natal genetic screening and counselling. Additional geneticists and staff would be required to provide a 24-hour service and to provide a hot-line service.

Campbelltown Hospital

Campbelltown has 22 Level 4 maternity beds and 20 level 4 neonatal beds. The Hospital had 2,673 deliveries in 2002/03. The hospital reported an 80% occupancy in 2002/03.

Campbelltown Hospital captures 75% of the Campbelltown births. A further 18% of Campbelltown births occur in Liverpool Hospital and a further 1% is captured by RPA and also by Westmead Hospital.

Campbelltown Hospital captures 46% of the Wollondilly births and 80% of the Camden births (2001/02).

The Domiciliary Midwifery Program reported 4,680 occasions of service. A further 1,324 non-inpatient occasions of service was reported in the delivery suite.

Camden Hospital

Camden Hospital has 10 level 3 maternity beds and 2 holding beds. The 10 beds were reported to have 69% occupancy. This service is planned to provide on-site 24-hour deliveries subject to agreed low-risk criterion. The service will have 24-hour medical coverage.

Camden reported 1,406 antenatal occasions of service.

80% of Camden births are captured by Campbelltown Hospital, with a further 10% going to Liverpool Hospital.

Bowral Hospital

Bowral Public Hospital has 12 level 3 maternity beds and 2 level 2 holding beds. 617 babies were born at Bowral in 2002/03. The ward reports 49% occupancy.

35% of the Wollondilly births occur at Bowral Hospital.

90% of births in Wingecarribee occur at Bowral Hospital, with a further 3% going to Campbelltown and 2% going to Westmead.

1,406 antenatal occasions of service were reported in 2002/03.

3.2 NEONATAL

The neonatal period is generally defined as the first 28 days of a baby's life. Neonatal Care is based on a large body of research-based evidence covering aspects of clinical management, nurse staffing and the economic basis of the service.

Infant survival rates, as well as rates of adverse outcomes for neonates, are highly dependent on the level of access to specialised neonatal support services. Policies and procedures for the resuscitation of the newly born infant which establish evidence based standards of clinical practice and underpin staff education and training programs play an important role in reducing perinatal morbidity and producing quality neonatal outcomes.

There continues to be steady growth in demand for neonatal intensive care services in SWSAHS. Neonatal intensive care beds are a statewide funded service and are therefore subject to planning by the State and the Perinatal Services Network. Premature babies (less than 37 weeks gestation) account for approximately 88% of admissions to neonatal intensive care units (NICUs) and babies less than 28 weeks account for half of the ventilator activity. Well premature babies born between 34 and 37 weeks and some premature babies at 34 weeks corrected age can receive on-going care in Level 4 neonatal units, and a smaller subgroup in Level 3 neonatal units.

An 8 bed neonatal intensive care unit consisting of 5 ventilated beds and 3 non-ventilated beds is located at Liverpool Hospital. The special care nurseries are located at each of the Area's hospitals with maternity units, except Camden and Bowral. They are provided at a level to complement the obstetric service. A total of 52 beds are provided as follows: Bankstown 10 beds, Fairfield 9 beds, Liverpool 15 beds (in addition to the 8 neonatal intensive care beds), Campbelltown 18 beds. Bowral and Camden Hospitals do not have dedicated special care nurseries although Bowral does have the capacity to care for babies requiring level 2 neonatal care with 2 beds available.

In 2002/03 the Area was 66% self sufficient for perinatology services (Neonatal Intensive Care) and 86% for qualified babies. In 2002/03 highest outflows for perinatology were to Westmead (27%) Children's Hospital, Westmead (22%), RPA (14%) and The Royal Hospital for Women (13%). Whereas for qualified neonates (special care nursery admissions) the Area was 88% self-sufficient. The largest outflows for perinatology were from the Bankstown and Campbelltown was (24%) and the Fairfield LGA (20%). In 2002/03 there were a total of 360 separations for the SRG perinatology and 2,199 for qualified neonates.

In 2006, the projections indicate the need for an additional 4 neonatal intensive care beds and 7 special care beds. The *State Neonatal Intensive Care Plan 2003 -2006* aims to enhance the way in which neonatal services are developed, managed, co-ordinated and supported. The Plan recommends that as a high priority SWSAHS receive an additional 4 NICU beds. Liverpool will be opening two additional NICU beds in 2004. An external review of both Maternal and Neonatal services has recently been completed.

The demand for perinatal services is forecast to increase significantly to 2006 (by 31.0%) and to increase by an additional 5.3% to 2011.

Current Services Provision

Neonatal Intensive Care Units (NICUs)

NICUs are provided as part of level 5 and level 6 neonatal services. The NSW Pregnancy and Newborn Services Network coordinates the NICUs and monitors the availability of beds in New South Wales and the Australian Capital Territory NICUs via the NSW Neonatal Intensive Care Bedstate Reporting System. This bulletin board is updated twice daily and provides information on ventilator and non-ventilator bed availability, ICU obstetric availability and the consultants on call at each facility with a NICU.

Special Care Nurseries (SCNs)

Special care nurseries provide care of infants who are ill following birth. Special care nurseries do not have ventilated beds. These nurseries are capable of providing care for babies > 34 weeks gestation with minimal complications and convalescing babies (for example babies that have been back transferred from a Neonatal Intensive Care Unit). It has been estimated that approximately 18 per cent of infants born in NSW are admitted to a special care nursery or a neonatal intensive care unit. Rates of admission to special care nurseries vary considerably between hospitals and particularly reflect local needs, admission policies and clinical practice variations. For example the percentage of babies admitted, of all births within NSW ranges from 5% to 44% across all Units. In SWS the rates range from 17-23%.

Bankstown Hospital

In 2002/03, there were 427 separations; average LOS was 7.5 days (7.7 days excluding day only). At 85% occupancy this is equivalent to 10 beds.

Fairfield Hospital

In 2002/03, there were 645 separations; average LOS was 6.1 days (6.2 days excluding day only). At 85% occupancy this is equivalent to 13 beds.

Liverpool Hospital

In 2002/03, there were 766 separations; average LOS was 10.1 days (10.3 days excluding day only). At 85% occupancy this is equivalent to 25 beds.

Campbelltown Hospital

In 2002/03, there were 623 separations; average LOS was 7.8 days (8.1 days excluding day only). At 85% occupancy this is equivalent to 16 beds.

Camden Hospital

In 2002/03 (March 2003-June 2003), there were 16 separations; average LOS was 2.4 days (2.5 days excluding day only) (Only open 4 months). At 85% occupancy this is equivalent to 14 beds.

Bowral Hospital

In 2002/03, there were 137 separations; average LOS was 4.1 days (4.3 days excluding day only). At 85% occupancy this is equivalent to 2 beds.

Research and Teaching

There is a full teaching programme for the registrars - accredited for 12 months of training in neonatology by the College of Physicians.

Major Equipment Needs

Both neonatal intensive care and special care nurseries require reliable equipment to deliver their services. A centralised equipment replacement program for the network would enable efficiencies to be achieved.

RECOMMENDATIONS

The Following are recommendations of a review conducted by Professor David Henderson-Smart:

- Establish an Area-wide Maternal and Perinatal Service.
- Appoint a full time Professor of Obstetrics as the Area Director for Maternal and Perinatal Services to provide leadership across the Area in implementing the recommendations of the review.
- Appoint an Area Director of Midwifery Services who would be supported by an expert Clinical Nurse Consultant (Midwifery) to work with the Area Director of Maternal and Perinatal Services.
- As a priority, engage the existing Area-wide multidisciplinary Maternity Service Network to develop and implement strategies to improve the integration, consistency and quality of maternal and perinatal services.
- Develop and implement Area-wide protocols for patient selection, inclusion and exclusion, consultation and transfer, according to the role of the Units, to ensure that services are provided at an appropriate level of care to meet the needs of women.
- Ensure that women are given the informed choice of a range of maternity service options consistent with the NSW Framework for maternity services, to be achieved by engaging consumers in the development of services.
- Provide Area-wide supervision of, and support and education programs for, medical and midwifery staff to ensure that all staff are provided with, and maintain, the level of skills required to provide appropriate services, including the resuscitation of neonatal infants and obstetric emergencies.
- Add two more ventilated beds to the neonatal intensive care unit and special care nursery at Liverpool to bring the total number of level 5 neonatal cots to 10, and add a further seven level 3 and level 4 neonatal beds as a step down from level 5 neonatal intensive care beds.
- Appoint three new specialists to the Materno-fetal Medicine Unit. This will enable the provision of 24 hour on call specialist obstetric emergency ultrasound currently not available.
- Appoint a staff specialist obstetrician as the Director of Maternity and Perinatal Services at Fairfield Hospital.
- Fairfield be a level 3 Maternity and Neonatal Unit and refer women with higher-risk pregnancies to Liverpool.
- Add four to six beds in Liverpool Hospital's inpatient Maternity Unit to allow for women with more complicated pregnancies to be referred from Fairfield Hospital.
- Review the admission policies at Fairfield Hospital to ensure admissions into the nursery are appropriate for the level of service.
- Camden Hospital be maintained as a low-risk level 3 maternity service with appropriate on-call anaesthetic cover and on-call paediatric support.
- Expand the range of pregnancy care options available to mothers at Bankstown and Campbelltown Hospitals.
- Examine the option of Bowral Hospital developing a hospital-based antenatal clinic to provide publicly funded services.
- Assess the development of a networked Domiciliary Midwifery program to be managed at Area Level.
- Enhance allied health services, in particular social work and physiotherapy, across the Area's six maternity units to provide appropriate levels of support for mothers and babies.
- Appoint an Academic Chair as Director of Anaesthetics with an interest in obstetric anaesthesia.