Health
Northern NSW
Local Health District

TWEED BYRON HEALTH SERVICE GROUP MATERNITY AND NEWBORN SERVICES PLAN 2016-2026

ACKNOWLEDGEMENTS

Northern New South Wales Local Health District (NNSW LHD) would like to acknowledge that this planning process relates to Aboriginal people within the Tweed Byron area of the Bundjalung Nation for which the members and elders of the local tribes and their forebears have been custodians for many centuries, and on which the local tribes have performed age old ceremonies of celebration, initiation and renewal. We acknowledge their living culture and unique role in the life of this region. Throughout this document when we use the term Aboriginal we are referring to Aboriginal Australians and Torres Strait Islander People.

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1. FOREWORD

The Tweed Byron Maternity and Newborn Services Plan has been developed in consultation with key stakeholders including Maternity and Newborn Services staff, Community and Allied Health staff, Mental Health and Drug and Alcohol Services, Child Protection Services, General Practitioners (GPs), Medical Specialists, consumer groups and other interest groups. The Plan focuses primary maternity services during the antenatal, intrapartum and 2-weeks of the postnatal period for women and babies, recognising the importance of linkages to a range of specialist services and the tiered network of maternity and neonatal services.

Over the next 10 years the tiered network of Maternity and Newborn Services in the Tweed Byron Health Service Group will continue to grow and develop as a coordinated and integrated network of services to meet the demand of the local population. Some services will need to expand and other services will need to be consolidated while the role of The Tweed Hospital as the Referral Hospital delivering specialist maternity and newborn services will be strengthened. The Health Service Group will also continue to develop its network relationship with Gold Coast University Hospital and other hospitals providing tertiary services in Queensland.

Over the next 10 years' continuity of care models will be sustained and enhanced in the Tweed Byron Health Service Group. There will also be a clear understanding of the role of each service and a focus on complimentary roles to ensure that the interface between Units supports seamless care.

Service development and new models of care will be dependent on the Health Service's capacity to recruit and train a skilled and experienced workforce. ICT infrastructure will continue to be expanded and developed to support a range of essential functions including the electronic Medical Record (eMR), reporting and sharing information across a range of clinicians in different clinical environments, a full range of Telehealth functions and videoconferencing and access to WiFi.

Most importantly Tweed Byron Health Service Group Maternity and Newborn Services will remain focused on providing high quality and safe care to women and newborns and their families and supporting them through a seamless patient journey which offers them informed choices.

I would like to take this opportunity to thank Tweed Byron Health Service Group Managers and staff, consumer representatives, representatives from key agencies including Friends of Tweed Valley Birthing Service and Mullumbimby Community Birthing Service and Breastfeeding Australia. Most importantly I thank the families who have given us their trust and allowed us to share the birthing journey with them.

Bernadette Loughnane
Executive Director Tweed Byron Health Service Group
Chair Tweed Byron Health Service Group Maternity and Newborn Services Plan Steering Committee

Our Vision for Maternity and Newborn Care

Maternity and newborn care will be woman centred, reflecting the needs of each woman within safe and sustainable quality systems.

Families will have access to high-quality, evidence-based, culturally appropriate maternity and newborn care in a range of settings as close as possible to where they live.

Appropriately trained and qualified maternity and newborn health professionals will be available to provide continuous care to all women and newborns.

Key Themes

The woman's right to self-determination in terms of informed choice, control, and continuity of care from a known caregiver.

The promotion of birth as a natural event for most women.

The need to minimise fear, particularly women's fear and improve support throughout labour and birth.

The need to develop programs of care, both midwifery and medical, that focus on providing continuity of care.

Woman Centred Care[1] reflects the needs of each woman within a safe and sustainable quality system and encompasses the needs of the baby, the woman's family, her significant others and community, as identified and negotiated by the woman herself. Woman-centred care also requires service planning and provision that is designed and implemented to respond to the needs of women within a safe and quality system.

[1] *NSW Health PD 2010_045 Maternity-Towards Normal Birth in NSW*

2. EXECUTIVE SUMMARY

2.1 INTRODUCTION

The Tweed Byron Health Service Group forms a network of clinical services which are linked through a formal management structure. In the Tweed Byron Health Service Group maternity and newborn services are available at The Tweed, Murwillumbah District and Byron Central Hospitals. The Tweed Hospital is the only Major Non-Metropolitan Referral Hospital. Other services within the Health Service Group include Tweed Valley Birthing Service and Byron Community Birthing. A level four Special Care Nursery is located at The Tweed Hospital.

For the purposes of this Plan maternity and newborn care includes antenatal, intrapartum and postnatal care for women and babies up to 2 weeks after birth and the interface with Child and Family Health Services. For the Midwifery Group Practice, postnatal care is provided by the allocated midwife up to 6 weeks postnatally depending on the need of the woman and available resources. This care is provided in a variety of public settings, and is supported by service capability frameworks, workforce, funding, information and data, and technological infrastructure.

In 2015 in response to the change in maternity service configuration at Murwillumbah District Hospital a formal risk assessment was undertaken. The NSW Kids and Families Risk Assessment Summary Report for Murwillumbah District Hospital Maternity Services made a number of recommendations including a recommendation that Northern NSW Local Health District (NNSW LHD) consider developing a Clinical Services Plan for Tweed Byron Health Service Group Maternity Services. In November 2015 NNSW LHD Executive endorsed the development of a Maternity Services Plan for the Tweed Byron Health Service Group.

NNSW LHD has commissioned a Health Services Plan for the Tweed Byron Health Service Group Maternity and Newborn Services to determine the future profile of these services provided within the Health Service Group and within a district-wide context.

The Tweed Byron Health Service Group Maternity and Newborn Services Plan:

- Provides an analysis of the needs of the population of the Tweed Byron Health Service Group in the context of Maternity and Newborn Services networked across the Health Service Group;
- Incorporates planning for ambulatory gynaecology services within the context of Women's Care Outpatient Services;
- Details planning assumptions that inform the projected inpatient capacity and role delineation levels for Maternity and Newborn Services of the Tweed Byron Health Service Group;
- Provides an assessment of demand for private and public Maternity and Newborn Services for Tweed and Byron Local Government Areas (LGAs) noting that Queensland private demand is not available;
- Details responsibilities of and linkages between facilities within the Tweed Byron Health Service Group, external partners and community agencies and the continuum of care for a patients' journey;
- Details the role of each service in regard to a networked and outreach approach with other health services;
- Identifies and confirms referral networks and service partnerships;
- Addresses key risks identified in the NNSW LHD Risk Register relevant to this Clinical Services Plan;
- Identifies gaps between current service provision and what may be required in the future;
- Identifies key priorities for NNSW LHD in relation to provision of Maternity and Newborn Services in the Tweed Byron Health Service Group;

- Provides projected inpatient facility requirements for Tweed Byron Health Service Group Maternity and Newborn Services to 2022 and 2027;
- Details current and future direction for workforce development for Tweed Byron Health Service Group Maternity and Newborn Services;
- Identifies clinical service priorities identified as part of the clinical service planning process.

The Plan is aligned with the NSW Kids and Families Strategic Framework *Healthy +Safe +Well, a strategic framework for children, young people and families 2014-2024* which was launched in 2014 by the Minister for Health, the Hon Jillian Skinner. The strategic framework is a 10 year strategic health plan for all children, young people and families in NSW which is structured around five key strategic directions:

1. Caring for Women and Babies: Providing better access to care from early pregnancy; evidence based options for birth and improved transition from postnatal to parenthood services.
2. Keeping children and young people healthy: Promote good health through improved screening and immunisation, encouraging individuals, families and communities to adopt healthier lifestyles, reducing risky behaviours and improving 'health literacy'.
3. Addressing Risk and Harm: Increase awareness of the health impacts of domestic and family violence, sexual assault and childhood maltreatment, identify and support children at risk of harm, and improve our ability to respond to, and treat, injuries caused by accidents and intentional harm.
4. Early Intervention: Target children at risk, strengthen early intervention services and therapies, improve developmental and disability outcomes, and engage proactively with families and young people to improve their long-term health.
5. Right Care, Right Place, Right Time: Deliver best-practice care as close to home as possible, integrate health care delivery across the State, raise safety and quality standards, and promote culturally-responsive, age-appropriate care.

Healthy Safe and Well is a 10 year strategic health plan for children, young people and families in NSW providing a policy roadmap from preconception to 24 years of age including women, babies, children, young people and families. It will also emphasise the importance of improving the health of newborn babies through changing behaviours during pregnancy.

The Tweed Byron Health Service Group Maternity and Newborn Services Plan focuses on:

- Antenatal Care;
- Ambulatory Gynecology Clinics;
- Birthing Services;
- Neonatal Care;
- Care to 6 weeks postnatal and the interface with Child and Family Health.

The NSW Kids and Families Strategic Framework identifies a number of critical elements to ensuring the Plan happens including attracting, training and retaining a highly skilled workforce is critical to maternity and newborn care. The range of skills required and distances between services necessitate a "flexible, skilled and culturally competent workforce with ready access to training, best practice knowledge and specialist advice." Future service development will also be underpinned by evidence and advances in eHealth which will drive integration, service delivery, access, communication and treatment.

The Plan also highlights the need to work in partnership across government and non-government agencies, the community and private sectors. The Plan also recognises that some families require extra attention. These include Aboriginal people, those experiencing domestic violence, mental health issues, substance use issues, teenagers and culturally diverse communities.

Tweed Byron Health Service Group has a significant Aboriginal population. All health care providers need to recognise that the intergenerational effects of social and emotional wellbeing issues for Aboriginal people have compounded the poor physical health and health outcomes for Aboriginal people. Trust,

cultural respect and recognition of the cultural values and traditions of Aboriginal people are important considerations which underpin health services to Aboriginal people. The *Northern New South Wales Integrated Aboriginal Health and Wellbeing Plan (2015)* articulates priorities and future directions for NNSW LHD and highlights the need to create a culturally safe work environment and health service. The Tweed Byron Maternity and Newborn Services Plan has been registered with the Aboriginal Health Unit and an Aboriginal Health Impact Statement is attached in Appendix 4.

Development of the Tweed Byron Health Service Group Maternity and Newborn Services Plan considers all critical elements detailed in the NSW Kids and Families Strategic Framework and has drawn on the key policy document for NSW Maternity and Newborn Services - PD2010_045 *Maternity - Towards Normal Birth in NSW*. *Maternity-Towards Normal Birth in NSW* provides direction to NSW Maternity Services to increase the vaginal birth rate and decrease the caesarean section operation rate and reduce unnecessary interventions. *Maternity-Towards Normal Birth in NSW* is informed by a range of core NSW Government documents including the NSW State Plan and the *National Maternity Services Plan 2010* as well as other relevant policy documents.

A Steering Committee led by the Executive Director Tweed Byron Health Service Group and including senior clinicians and community representatives was formed to oversee development of the Tweed Byron Health Service Group Maternity and Newborn Services Plan. Terms of Reference are attached in Appendix 2.

A consultation strategy was developed and endorsed by the Steering Committee to inform the development of the Clinical Services Plan. Extensive consultation with management, staff, community and other partner agencies has been undertaken. A consultation report was prepared for the Steering Committee and information gathered from the consultation process has been incorporated into the Tweed Byron Health Service Group Maternity and Newborn Services Plan.

2.2 Tweed Byron Health Service Group Maternity and Newborn Services

Within the Tweed Byron Health Service Group there is a tiered network arrangement where the lower role delineated services will refer to The Tweed Hospital. The Tweed Hospital offers a level 5 birthing service and level 4 neonatal services staffed by specialist obstetricians, paediatricians, registrars and midwives. The Byron Central Hospital and the Tweed Valley Birthing Service offer level 2 birthing services supported by a level 1 neonatal service. These services provide a continuity of care model for normal risk pregnant women who are allocated a known midwife who provides individualised care and follows through her antenatal, intrapartum and early postnatal journey.

Maternity and Newborn Services are supported by Community and Allied Health staff and clinical streams such as Mental Health and Drug and Alcohol and Child Protection Services.

There are also other hospital services located just over the Queensland border. The closest is John Flynn Private Hospital which is 10km away (EDT of 10min), Gold Coast Hospital Robina Campus is 25km away (EDT of 20min) and the Gold Coast University Hospital Southport is 45km away (EDT of 35min) from The Tweed Hospital.

2.3 Maternity and Newborn Services Models of Care

Within Tweed Byron Health Service Group there is a tiered network of service provision. Primary maternity care is where the responsibility for maternity care rests with the primary level maternity care provider (in this case, the midwife and/or GP). The safety and effectiveness of primary maternity care is underpinned by a collaborative services framework for care providers that ensure appropriate assessment, timely referral and access to secondary and/or tertiary services.

The National Midwifery Guidelines for Consultation and Referral describes the parameters for identifying normal risk pregnancy and supports midwives to make appropriate consultation and referral to other clinicians and allied health staff if risk factors arise in pregnancy.

Secondary maternity care is where the responsibility for maternity care rests with the medical practitioner (such as a GP with an obstetric qualification, specialist obstetrician, or the medical staff on duty in the referral hospital) working in collaboration with a midwife or midwives who continue to provide midwifery care. Specialist Obstetricians/Gynaecologists provide care which is informed by the Royal Australian and New Zealand College of Obstetricians and Gynaecologists who provide evidence based statements and guidelines.[2]

Tertiary maternity care is when responsibility for maternity care rests with a healthcare provider in a specialised maternity hospital. This provider usually works with a team which may include an obstetrician, neonatologist, midwife or other specialised services. For the Tweed Byron Health Service Group tertiary care is generally provided in Brisbane or at the Gold Coast University Hospital.

The Tweed Byron Health Service Group has escalation plans in place to ensure the appropriate accommodation of a neonate or a pregnant woman. In the first instance, local escalation plans promote the tiered network of services within the Health Service Group and the Perinatal Services Network.

Antenatal care within the Tweed Byron Health Service Group is provided by Midwives, specialist Obstetricians/Gynaecologists and Registrars depending on the patient's assessed risk level. Antenatal Clinics both medical and midwifery are available. Paediatric Clinics are also provided by specialist Paediatricians and Registrars at The Tweed and Murwillumbah District Hospitals.

Continuity of care is the practice of ensuring that a woman knows her maternity care provider/s and receives care from the same provider, or small group of providers, throughout pregnancy, labour, birth and the postnatal period. Continuity of care models are available at Tweed Valley and Byron Community Birthing Service including:

- Midwifery Group Practice is a continuity of care model for normal risk pregnant women who are allocated a known midwife who provides individualised care and follows the woman across the interface of community and hospital services, through her antenatal, intra partum and early postnatal journey up to 6 weeks post birth. Two of the team midwives are present for the birth. An on-call doctor who can assist with an operative vaginal delivery without regional anaesthesia is available at all times;
- Women may also share their antenatal care between a Byron Community Birthing Service Doctor and primary midwife. Both the doctor and midwife are present at the birth;
- Women who choose to give birth at home are attended by the team midwife. Antenatal visits take place either in the woman's home or at the birth centre. Two midwives attend the birth. This service is available through Byron Community Birthing Service;
- The Midwifery Group Practice currently provided by Tweed Valley and Byron Community Birthing Services provides a woman with a primary midwife and a backup midwife for the antenatal, intrapartum and postnatal periods;

At The Tweed Hospital, which provides level 5 role delineation maternity services:

- Intrapartum care is provided by a Registered Midwife during labour and birth, with a one to one ratio of midwife to each labouring woman;

[2] https://www.ranzcog.edu.au/college-statements-guidelines.html

- Medical support is available during business hours and through an after-hours on-call basis for consultation and referral;
- Women receive inpatient care provided by midwives 24 hours per day, 7 days per week;
- Women often have a short stay with an expectation of follow up with their Obstetrician or GP. They may be cared for by a number of midwives and rooming in is the norm;
- Care of bariatric maternity patients at The Tweed Hospital is based on clinical condition;
- The Special Care Nursery is a level 4 Neonatal Unit providing specialist care to sick term and pre-term neonates. The Nursery is supported by staff Specialists, Paediatricians and nursing staff;
- Women wishing to discharge early may access the Early Discharge Program with access to a Midwife through phone contact or home visiting for up to 7 days. The service is available to women who reside within a set geographical area from The Tweed Hospital.

2.4 Key Service Drivers

- The number of women aged 15-44 years (child bearing age group) in the Tweed LGA is expected to grow by 10.1 % from 14,298 in 2011 to 15,749 in 2026 or 10.1% over the 15 year period;
- For Byron Shire the same cohort is expected to grow by 5.7% from 5,540 in 2011 to 5,857 in 2026;
- This growth in population of child bearing age will impact on demand for maternity and newborn services in the Tweed Byron Health Service Group;
- A significant Aboriginal population representing 4% of the total Tweed LGA population in 2011 and accounting for 26% of the total NNSW LHD Aboriginal population;
- The Aboriginal population is considerably younger than the non-Aboriginal population. In 2011, the median age for this population was 21 years, 16 years less than the national median age of 37.2 years;
- The Aboriginal population is disadvantaged across all domains of wellbeing compared to their non-Aboriginal counterparts;
- A range of socio-economic indicators demonstrate that the Aboriginal population in Northern NSW is disadvantaged;
- Increasing demand for maternity and newborn services and a consistent cross border flow of patients from southern Queensland;
- Fertility rates in Tweed LGA are slightly higher than the overall rate for NSW;
- Below average NSW SEIFA score;
- Higher than NSW average rates of smoking during pregnancy in the Tweed LGA;
- The immunisation rate for children aged 1 year is significantly low (71%) in Byron LGA.

2.5 Key Issues Tweed Byron Health Service Group

- There is a need to improve the service integration of maternity and newborn services within the tiered network of services to ensure women have access to the appropriate model and level of care as close to home as possible;
- There is a need for maternity and newborn services to be continuous, seamless and coordinated across the Health Service Group;
- Services for vulnerable families need to be integrated and coordinated and the special needs of Aboriginal mothers and babies recognised;
- Recognition of the special needs of Aboriginal babies who are more likely to be of low birth weight than non-Aboriginal babies;
- There is a need to increase access to continuity of care models across the Health Service Group;
- Although there is an overarching management and clinical governance structure within the Health Service Group there is no shared vision and an inconsistent cohesiveness and coordination between the three birthing services;
- While there aren't current workforce issues in the Tweed Byron Health Service Group, other Maternity Services in NSW and other States have experienced difficulties in attracting and recruiting Obstetricians and Midwives. The Tweed Byron Health Service Group will continue to

improve workforce strategies to maintain a suitability qualified workforce to support the delivery of services;

- There is a need to clearly articulate the role and boundaries for each birthing service and how these services link to higher level care both at The Tweed Hospital and in Queensland;
- There may be inconsistency between the medical evidence and policy; should this arise decisions are made based on the best available medical evidence;
- A clear and accessible communication strategy is required to support women to make an informed choice;
- There is a need to clarify the boundaries between the Tweed Byron Health Service Group and Gold Coast Hospital and Health Service;
- NSW Kids and Families Risk Assessment Summary Report (Murwillumbah District Hospital) recommends that NNSW LHD consider development of a well-articulated communication strategy for birthing services available across the Tweed Valley, including location of pathways for access, with consistent messaging for both the community and staff;
- There are multiple management structures for maternity and newborn services;
- Levels of communication between service providers varies across the Health Service Group;
- Multiple patient registration numbers create confusion and an additional administrative burden on staff;
- Inconsistency in registered baby names when transfers occur may make matching records problematic;
- A focus on education and training is required to support the introduction of new models of care;
- Some facilities require redevelopment to improve functionality and to support implementation of contemporary models of care;
- Byron Shire has a very low immunisation rate and reported resistance to vaccination.

2.6 Future Service Directions

The Tweed Byron Health Service Group will need to develop multiple strategies for the continued provision of high quality and flexible maternity and newborn services across the Tweed Byron Health Service Group with particular focus on the following:

- Delivery of Maternity and Newborn services commensurate with the needs of the community and population demand;
- Tweed Byron Health Service Group to continue to invest in the development and implementation of data systems that enable access to accurate clinical information that enables measurement of service outputs with reference to the *National Maternity Services Plan* and *Maternity – Towards Normal Birth* and related frameworks;
- This information to be used to inform service development and provision;
- Implementation of Activity Based Funding (ABF) Health Services should monitor and respond to clinical variation;
- Continued strengthening of the role of The Tweed Hospital as the referral hospital for Maternity and Newborn Services
- Strengthening clinical networking arrangements and referral systems across Maternity and Newborn Services and community and primary health care services with a focus on integrated service provision across the continuum to support the patient journey, enhance coordination of care and reduce duplication;
- Enhanced communication between Maternity and Newborn Services, government and non-government agencies, General Practice and the community;
- Enhanced communication between Maternity and Newborn Services, Community and Allied Health, Aboriginal Health, Mental Health and Drug and Alcohol Services and non-government organisations providing maternity and newborn services;

- A focus on providing culturally respectful and accessible services to Aboriginal women and babies,[3] providing facilities which are of a culturally appropriate design with guidance from the Aboriginal community;
- A focus on collaborative service development and an enhanced governance model to underpin innovative practice;
- Continued implementation of *Maternity - Towards Normal Birth in NSW*;
- Continued development of evidence-based models of care;
- Continued networking with Gold Coast Health Services;
- Recognition of the interdependence between facilities;
- Staged improvement of facilities which promote the implementation of contemporary models of care, improved linkages and functionality;
- Future facility redevelopment to include flexibility of design to support service delivery and contemporary models of care;
- Facility design and configuration to meet the needs of people with disabilities;
- Development of ICT infrastructure to support clinical service delivery through a capable and reliable computer network, fixed and mobile end user devices, access to WiFi across inpatient areas and a suite of clinical software tools that support and further progress the eMR;
- Implementation of key priorities and actions for Tweed Byron Maternity and Newborn Services over the next 10 years.

2.7 Recommended Future Facility Development

2.7.1 The Tweed Hospital Women's Care Unit

The staged redevelopment of The Tweed Hospital to include the redevelopment of the Maternity Unit to deliver an integrated maternity and newborn service, meet demand, facilitate implementation of contemporary models of care and improved linkages. The functionality of an integrated maternity and newborn services unit to deliver:

- Sufficient capacity for Obstetrics and Gynaecology Outpatient Clinics, Diabetes in Pregnancy Clinics, treatment rooms, access to multifunction meeting and group rooms and Telemedicine facilities with an appropriate level of privacy;
- A designated area for Early Pregnancy Assessment within The Tweed Hospital;
- Sufficient capacity for staff and students including access to education facilities and to accommodate community education programs;
- Assessment rooms and waiting area to support implementation of the Midwifery Group Practice model;
- Improved linkages between the Women's Care Unit and Outpatients Department;
- Capacity in the Women's Care Unit to provide 19 Women's Care beds;[4]
- Rooms should also include space for partners;
- Day Stay Unit with four Day Stay places (two beds and two chairs);
- Two rooms in the Maternity Unit with capacity and facilities to care for bariatric maternity patients;
- Increase the number of birthing rooms in the Maternity Unit at The Tweed Hospital from four in 2016 to eight in 2022, remaining at eight in 2026 including water immersion in labour and delivery;
- Birthing rooms to accommodate Midwifery Group Practice model and their design and furnishing to meet the needs of birthing women;
- Provision of a breastfeeding room for patients, visitors and staff;
- Provision of overnight accommodation for Registrars;

[3] *Aboriginal babies include those babies who are biologically Aboriginal of non-Aboriginal mothers*

[4] *This number of beds is dependent on Gynaecology patients being located in a surgical ward*

- Ensure the Unit is of a culturally appropriate design to meet the needs of Aboriginal people;
- Increased access to operating theatre space to include a designated Obstetric list;
- Development of a designated Obstetrics Operating Theatre within the Perioperative Unit and in close location to the Women's Care Unit to facilitate timely transfer;
- As part of a redevelopment of surgical services, gynaecological surgery patients to be cared for in the surgical ward.

2.7.2 The Tweed Hospital Special Care Nursery

There is substantial evidence that a mother keeping her baby with her continuously during the day and at night (called "rooming-in") has many benefits. Rooming-in makes breastfeeding easier. The benefits of keeping mothers and babies together are so impressive that many professional organisations have made recommendations promoting skin-to-skin contact and rooming-in and opposing routine separation of mothers and babies after birth. [5]

In planning for future development of The Tweed Hospital a redeveloped Special Care Nursery will need to accommodate the needs of mothers, babies and partners. There will need to be capacity to ensure an environment in which rooming-in can be achieved prior to discharge.

There is a need to improve the capacity, design, layout and functionality of the Special Care Nursery including:

- Increased capacity and improved functionality within the Unit;
- Increasing the number of cots from six to eight in 2021/22, increasing to nine in 2026/27 with capacity for an additional five cots to allow for fluctuations in demand and enable the Unit to surge to 13 cots;
- Improved sensory environment – particularly with regard to making the Special Care Nursery more baby friendly with regard to noise and light;
- Access to a designated breastfeeding/expressing room within the Women's Care Unit;
- Facilitate and encourage parents' ability to participate in care including overnight stays in the Special Care Nursery;
- Consideration of capacity for rooming-in within the Special Care Nursery in line with NSW Health Facility Guidelines;
- Development of a Step Down Unit to provide accommodation (two dedicated rooms) for mothers of preterm babies preparing for discharge allowing mothers to "room-in" with their babies prior to discharge;
- Provision of access to a breastfeeding room as well as breast pumps for mothers whilst baby is in the Special Care Nursery;
- Provision of a waiting room within the Special Care Nursery which can be used by visitors and families;
- A small kitchenette for tea and coffee and heating parents' meals;
- Expansion of storage space in the Special Care Nursery;
- Provision of Telehealth facilities that enable timely consultation with Paediatric Specialist Services in tertiary level facilities potentially minimising transfers and possibly decreasing length of stay and maximising patient care;
- Identify opportunities to enable closer links between Outpatients Departments and the Special Care Nursery;
- Consider the need for a dedicated Neonatal Nurse Education positon and enhanced lactation support roles.

[5] *Keep Mother and Baby Together – It's Best for Mother, Baby, and Breastfeeding Jeannette Crenshaw, MSN, RN, NEA-BC, IBCLC, LCCE, FACCE*

2.7.3 Murwillumbah District Hospital Women's Care Unit - Outpatients Department

Future development of the Women's Care Unit at Murwillumbah District Hospital to include as the highest priority a new Outpatients Department to accommodate both Antenatal and Gynaecology Clinics ideally located in the Women's Care Unit:

- Within the Department capacity to support contemporary models of care and to accommodate Registrars and Medical and Midwifery students;
- A minimum of six consulting rooms one of which can be used as a minor procedure room;
- Ambulatory Care Unit section with two Day Only beds and two chairs;
- One larger procedure room to increase those services that can be offered;
- A family quiet room;
- Breastfeeding room for staff, visitors and patients;
- Waiting area which affords privacy and has a safe play area for small children.

2.7.4 Murwillumbah District Hospital-Tweed Valley Birthing Service

Provide improved facilities for birthing including:

- Planning for renovations to the current birthing suites to improve the layout, functionality and birthing environment to support sustainability of the service;
- Replacement of the bath in the second birthing room at Murwillumbah District Hospital to accommodate immersion in water during labour and delivery;
- Planning for provision of a second ensuite bathroom and toilet in the birthing suite;
- Access to improved waiting area for Birthing Service with a safe play area for small children;
- Provision of a second neonatal resuscitation trolley allowing a neonatal resuscitation trolley to be located in each birth suite at all times;
- The neonatal rescusitaires in each birthing suite should be of the same make and identically set up to ensure staff familiarity and competency.

2.7.5 Byron Central Hospital - Byron Community Birthing Service

The three birthing suites and associated facilities are considered appropriate to meet current and future demand to 2026 per the Byron Shire Clinical Services Plan 2012.

2.8 Expected Benefits

Expected benefits include:

- Provision of appropriate service capacity to meet projected demand;
- Services closer to people's home including increased surgical and oncology capacity;
- Increased capacity to implement contemporary models of care;
- Increased sustainability of local services to improve responsiveness to the needs of the local community;
- Provision of equitable access to maternity and newborn care that ensures continuity of care and improves women's experience and outcomes;
- Improved choice for women;
- Improved access to continuity of care models that result in reduced intervention rates improved outcomes and greater cost efficiency of services;
- Enhanced quality and safety of care and reduction in risks;
- Opportunities to advance service integration along clearly defined care pathways;
- Improved partnership arrangements to support service delivery through better service coordination and integration, providing the right care in the right place at the right time;
- Improved operational, service and workforce sustainability;
- Effective use of information management and technology (including communication) services to enhance clinical decision making and improve patient care;
- Financial sustainability through appropriate resource allocation;

- Greater integration and focus on the patient journey through eHealth and Telehealth initiatives to better meet the needs of patients;
- Improved workforce utilisation and development – with better deployment of staff and the ability to implement contemporary models of care through accessible services.

Benefits to the local community will include:

- Improved access to a wider range of health services provided locally;
- Larger, modern and safer facilities built in accordance with current Health Facility Guidelines and building codes;
- Construction of culturally appropriate facilities for a large local population.

These improvements will increase local capacity to provide a quality response to the health needs of the catchment including disadvantaged groups, Aboriginal communities and people living with mental illnesses.

Key outcomes of the proposed service reconfiguration and facility development will include the following:

- The new facilities will support integrated service provision across a range of services;
- Achievement of significant improvement in access to a range of health services;
- Expanded capacity to respond effectively to community needs;
- More effective and efficient use of available clinical staff, improved staff satisfaction and greater capacity to attract and retain staff; and
- Greater capacity to meet the healthcare requirements of the growing and ageing population into the future.

3. ABOUT THE SERVICES PLAN

3.1 PLANNING CONTEXT

This service planning process is informed by and aligned with, strategic plans that are linked to relevant system-wide policies, plans and programs including:

- NSW 2021-A Plan to Make NSW Number One;
- NSW State Health Plan Towards 2021;
- NSW Rural Health Plan Towards 2021;
- NNSW LHD Strategic Plan 2012-2017;
- NNSW LHD Health Care Services Plan 2013-2018;
- NNSW LHD Asset Strategic Plan 2013-2023;
- Northern NSW Integrated Aboriginal Health and Wellbeing Plan 2015-2020;
- Healthy, Safe and Well: A Strategic Health Plan for Children, Young People and Families 2014–2024.

NSW Kids and Families Strategic Framework "Healthy+Safe+Well, a strategic framework for children, young people and families 2014-2024" was launched in 2014 by the Minister for Health, the Hon Jillian Skinner. The strategic framework is a 10 year strategic health plan for all children, young people and families in NSW.

The Plan is structured around five key strategic directions:

1. Caring for women and babies;
2. Keeping children and young people healthy;
3. Addressing Risk and Harm;
4. Early Intervention;
5. Right Care, Right Place, Right Time.

Tweed Byron Maternity and Newborn Services Plan is aligned with the Strategic Directions detailed in Healthy+Safe+Well. The scope of the Plan will include Maternity and Newborn Services in the Tweed Byron Health Service Group within a framework of tiered maternity and newborn services and their key partners.

The National Maternity Services Plan 2010 sets national priorities for maternity and newborn care which are consistent with the *NSW Kids and Families Strategic Framework.* A NNSW LHD Strategic Health Plan for children, young people and families will be developed in 2016. The Tweed Byron Health Service Group Maternity and Newborn Services Plan will be incorporated into the Plan**.**

3.2 PLAN DEVELOPMENT

In the development of the Tweed Byron Health Service Group Maternity and Newborn Services Plan a consultation process was undertaken including:

- A Steering Committee comprised of key service managers, senior clinicians and community representatives was convened and met to oversee development of the draft Plan;
- Discussion with key clinicians, Hospital and Community Health staff and community representatives;
- Review of Commonwealth, State and NNSW LHD policies, procedures and other documentation;
- Development and analysis of the Epidemiological profile for Tweed LGA; and
- Data analysis including planning assumptions.

3.3 PURPOSE

The purpose of the Tweed Byron Health Service Group Maternity and Newborn Services Plan is to promote an integrated approach to maternity and newborns service delivery for residents of the Tweed Byron Health Service Group which supports further service development and clinical networking and

partnerships. The Clinical Services Plan outlines the strategic direction for Tweed Byron Maternity and Newborn Services emphasising a tiered network of services within the Health Service Group.

The Maternity and Newborn Services Plan aligns with the scope endorsed by the NNSW LHD Board and seeks to summarise directions for Maternity Service development and priorities for action to address current service delivery issues, as well as some longer term approaches for clinical service developments and enhancements to meet the projected needs of catchment communities.

3.4 Planning Principles

The following planning principles guided the planning process in developing The Tweed Hospital Clinical Services Plan 2012 and inform the Service Statement:

- Ensuring the provision of affordable, locally available, appropriate maternity services which are responsive to identified community need;
- Facilitating the development of alternative innovative models of care based on best practice and contemporary evidence;
- Fostering the provision of a skilled workforce through attraction and retention of quality staff;
- Strengthening relationships between The Tweed Hospital and other hospitals within the Tweed Byron Health Service Group;
- Strengthening collaboration and partnerships with internal and external partners;
- Strengthening the interface between acute care, community care, primary health care (especially General Practice), residential aged care and care within the community.

3.5 Structure and Approach

Tweed Byron Health Service Group Maternity and Newborn Services Plan was informed and guided by:

- Review of key documentation;
- A comprehensive consultation process with key stakeholders.

The Tweed Byron Health Service Group Maternity and Newborn Services Plan 2016-2026 is structured to create a cascade of information through sequential description of the following matters:

- Policy and planning context including the strategic direction for the Tweed Byron Health Service Group within the overall NNSW LHD;
- Governance and service structures within which services are delivered;
- Socio-demographic profile of the people served;
- Current services including networks and role delineation;
- Current services overview;
- Projected future demand;
- Future services profile;
- Clinical priorities;
- An Action Plan to implement the requirements of the Tweed Byron Health Service Group Maternity and Newborn Services Plan.

3.6 Planning Methodologies

The NSW Ministry of Health provides a range of health statistics and endorsed planning tools to determine past and current activity plus trend analysis and to predict future demand. The tools used in this Plan include NSW Health FlowInfo Inpatient Services Planning Tool version 15.0, Acute Inpatient Modelling Tool, NSW Health aIM2012 version 2.2 and various data collection systems used by NNSW LHD to monitor and manage activity and service delivery.

3.7 POLICY CONTEXT

Commonwealth and State government health policy directions and service priority areas provide a framework for delivering health services in NSW. These are updated on a regular basis to reflect emerging international and national trends. Service planning activities in the health sector are informed by, and aligned with, strategic plans that are linked to relevant system-wide policies, plans and programs.

The NSW Ministry of Health requires LHDs to operate within the NSW Performance Framework.[6] The Framework sets out performance outcomes that are to be accomplished by LHDs to achieve prescribed levels of health improvement as well as service delivery, key performance indicators (KPIs) and financial performance as set out in their Service Agreements. The Framework is aimed at promoting and supporting a high performance culture within the NSW Health system.

A comprehensive environmental scan of relevant national, state and local frameworks, policies and plans and redesign initiatives was undertaken prior to commencing the service planning process to ensure consistency and a contemporary approach.

There are a number of important Policy Directives which shape the way Maternity Services are delivered in NSW. PD2010_045 - *"Maternity-Towards Normal Birth in NSW"* provides direction to maternity services regarding actions to increase the vaginal birth rate and decrease caesarean section operation rates. The Policy aims to develop, implement and evaluate strategies to support women to have a positive experience of pregnancy and birth. It also aims to ensure that midwives and doctors have the knowledge and skills to support women who choose to give birth without technological interventions unless necessary, use non-pharmacological interventions, use birthing pools and different positons for labour and birth.

In line with the Tweed Byron Health Service Group Tiered Maternity Services Network this Plan supports and is consistent with PD2010_045 and other key Policy Directives and Plans including:

- PD 2006_045 Public Home Birth Services;
- PD 2008_027 Clinical Care and Resuscitation of the Newborn Infant;
- PD2010_016 SAFE START Strategic Policy;
- PD 2010_017 Maternal and Child Health Primary Health Care Policy;
- PD2010_045 Maternity – Towards Normal Birth in NSW;
- PD 2010_069 Critical Care Tertiary Referral Networks (Perinatal);
- PD 2011_042 Breastfeeding in NSW: Promotion, Protection and Support;
- GL2014_004 Supporting Women in their Next Birth After Caesarean Section;
- GL2014_022 Guidelines for the Management of Substance Use During Pregnancy Birth and the Postnatal Period;
- NSW Health Guide to Role Delineation of Clinical Services 2016;
- Baby Friendly Health Initiative (to protect, support and promote breast feeding);
- National Maternity Services Plan 2010;
- NSW Kids and Families Having a Baby.

All reference documents are detailed in Appendix 2.

3.8 ABORIGINAL HEALTH IMPACT STATEMENT

An Aboriginal Health Impact Statement has been completed and is attached to the Tweed Byron Health Service Group Maternity and Newborn Services Plan (Registration number: TBHSG/2016/01).

[6] *NSW Health. A health care system to meet our needs. Health Reform: Improving Patient Care, Performance Framework, 2013-2014*

3.9 National Safety and Quality Framework

The Australian Commission on Safety and Quality in Health Care developed the National Safety and Quality Framework which is based on a vision for safe and high quality care for Australia and was approved in principle in April 2008. The Framework came out of a directive from the Australian Health Ministers' Conference and the perspectives of the Framework are to:

- Promote patient focused care that is respectful of and responsive to individual preferences, needs and values;
- Use evidence based information to improve the safety and quality of care, reduce unjustified variation in standards of care and to improve patients' experiences and clinical outcomes;
- Redesign organisations with a focus on safety including organisational structures, work processes and funding models including the provision of recognition and reward for organisations who take responsibility for safety.

4. POPULATION PROFILE AND PROJECTIONS

4.1 NORTHERN NEW SOUTH WALES LOCAL HEALTH DISTRICT

The NNSW LHD comprises a total of 13 Statistical Local Areas (SLAs), seven LGAs and the Urbenville part of Tenterfield LGA. The LHD is divided into two Health Service Groups and in 2011 had an estimated population of 288,241.

NNSW LHD covers an area of 20,732 square kilometres, extending from Clarence Valley LGA in the south to the Tweed LGA in the north. The western and southern borders of NNSW LHD join Hunter New England (HNE) and Mid North Coast (MNC) LHDs.

In 2011 the estimated population of NNSW LHD was 288,241 persons. Of these 141,336 (49.2%) were male and 146,336 (50.8%) were female. The North Coast of NSW also attracts a growing seasonal influx of international and domestic tourists with an estimated 2.3 million overnight visitors to NNSW LHD LGAs in 2014.

Northern NSW is one of the fastest growing regions of NSW and also has one of the oldest age profiles. Over the 10 years between 2011 and 2026, the overall population of NNSW LHD is projected to increase by 11.9% and by 53% for the population aged 65 years and over.

Table 1: NNSW LHD Population Changes by LGA – 2011 – 2026

LGA	2011	2016	2021	2026	% Projected growth 2011-2021	% Projected growth 2011-2026
Ballina	40,747	41,949	43,028	43,988	5.6	8
Byron	30,712	32,235	33,636	34,977	9.5	13.9
Clarence Valley	51,287	52,575	54,091	55,343	5.5	7.9
Kyogle	9,537	9,587	9,621	9,623	0.9	0.9
Lismore	44,348	46,015	47,574	48,992	7.3	10.5
Richmond Valley	22,717	23,472	24,140	24,709	6.3	8.8
Tweed	88,437	93,975	99,352	104,549	12.3	18.2
Urbenville part of Tenterfield	456	466	461	461	1.2	1.1
Total Northern NSW	**288,241**	**300,274**	**311,903**	**322,641**	**8.2**	**11.9**

Source: NSW Department of Environment and Planning New South Wales State and Local Government Area Population Projections: 2014

The number of women aged 15-44 years (child bearing age group) in the Tweed Byron Health Service Group in 2011 was 19,838. This population is projected to grow by 8.9% between 2011 and 2026 to 21,606. The number of women aged 15-44 years (child bearing age group) in Tweed LGA in 2011 was 14,298. This population is projected to grow by 10.1 % to 15,749 in 2026. In Byron Shire in 2011 the number of women in this cohort was 5,540. This population is projected to grow by 5.7% to 5,857 in 2026. This growth in

population of child bearing age will impact on demand for maternity and newborn services in the Tweed Byron Health Service Group.

Table 2: NNSW LHD Population (Females 15-44 years) Changes by LGA – 2011 – 2026

	2011	2016	2021	2026	% Change
Byron	5,540	5,649	5,692	5,857	5.7
Tweed	14,298	14,829	15,261	15,749	10.1
Total Tweed Byron HSG	**19,838**	**20,478**	**20,953**	**21,606**	**8.9**

Source: NSW Department of Environment and Planning New South Wales State and Local Government Area Population Projections: 2014

4.2 Tweed Byron Health Service Group Catchment Population

The Tweed Byron Health Service Group covers an area of 1,876 square kilometres and is the northern most part of NNSW LHD. Tweed Byron Health Service Group shares its southern border with the Richmond Clarence Health Service Group, its western border with HNE LHD and its northern border with Queensland.

The Tweed Byron Health Service Group catchment includes Tweed and Byron LGAs with an estimated population of approximately 119,149 in 2011. This population is projected to grow by 17% between 2011 and 2026 to a population of 139,526 or an additional 20,377 people.

The Tweed Hospital is also the main public referral hospital for residents of Tweed and Byron LGAs and several southern Gold Coast SLAs. Queensland residents from Coolangatta, Currumbin-Tugun, Currumbin Waters, Currumbin Valley-Tallebudgera, Elanora and Palm Beach access services at The Tweed Hospital. These are natural flows due to the close proximity of The Tweed Hospital to these localities. The population of these SLAs is considered part of the catchment for The Tweed Hospital.

The population of the southern Gold Coast regularly accessing services at The Tweed Hospital was approximately 59,334 in 2011, and is projected to grow by 17.8% to 69,924 in 2021 and by 26% between 2011 and 2026 to 75,287.[7]

The total catchment population for the Tweed Byron Health Service Group in 2011 including the southern Queensland catchment was 178,483.

4.3 Key Demographic Trends

For the Tweed Byron Health Service Group there are four key demographic features that will impact on health status and health service delivery for maternity and newborn services into the future:

- Significant population growth;
- Growth in the women within the child bearing age group particularly in the Tweed LGA;
- Low socio-economic status;
- High proportion of Aboriginal residents.

4.4 The Tweed Hospital Catchment

The primary catchment for The Tweed Hospital includes Tweed LGA and the southern Queensland SLAs of Coolangatta, Currumbin-Tugun, Currumbin Waters, Currumbin Valley-Tallebudgera, Elanora and Palm Beach. The total population of the Tweed LGA in 2011 was 88,437 residents. This population is projected to grow by 18.2% to 104,549 in 2026 - an increase of 16,112 people.

[7] *Queensland Government Population Projections 2011 edition (medium series), Office of Economic and Statistical Research, Queensland Treasury*

The population of the southern Gold Coast regularly accessing services at The Tweed Hospital was approximately 59,334 in 2011, and is projected to grow by 17.8% to 69,824 in 2021 and by 26% between 2011 and 2026 to 75,287.[8]

4.5 Murwillumbah District Hospital Catchment

Murwillumbah District Hospital Maternity Services are part of a tiered network of maternity and newborn services within the Tweed Byron Health Service Group. The catchment population includes a portion of Tweed LGA. NSW Ministry of Health population data is only available to LGA level. Therefore, ABS Quickstats, Murwillumbah Region (Statistical Region Level 2) data has been used to provide an indication of the population profile of the catchment for Murwillumbah District Hospital Birthing Service. The Murwillumbah Region includes the township of Murwillumbah and surrounding rural areas including among others Byrrill Creek, Tyalgum, Uki, Clothiers Creek and Tumbulgum. For some services the postcode is used to define the catchment e.g. Community Health Services. Murwillumbah Community Health catchment includes Murwillumbah (2484), Stotts Creek (2487), Bogangar, Cabarita Beach, Tanglewood (2488), Pottsville, Hastings Point (2489) and Tumbulgum (2490).

In 2011 there were 9,549 people residing in the Murwillumbah region. Of these 4,811 were male (50.5%) and 4,738 were female (49.6%). The median age was 45 years. Aboriginal and/or Torres Strait Islander people made up 2.4% of the population. In 2011 the population of women of child bearing age (15-44 years) residing in the Murwillumbah region was 1,388 or 12% of the Tweed LGA population of women of child bearing age.

4.6 Byron Central Hospital Catchment

Byron Central Hospital will be part of a tiered network of maternity and newborn services within the Tweed Byron Health Service Group. The catchment population includes Byron LGA.

The population of Byron LGA in 2011 was 30,107. This population is projected to grow by 13.9% between 2011 and 2026 - an increase of 4,265 people. The most significant change in the population profile for Byron LGA is the projected growth in residents aged ≥65 years which is expected to increase by 75.4% between 2011 and 2026 – an increase of 3,057 people. By 2026 this age group will represent 20% of the Byron LGA population.

4.7 Aboriginal People

The traditional custodians of the land covered by the Tweed LGA is the Bundjalung Nation. In 2011, 13,660 people identified as having Aboriginal heritage representing 4% of the total population of NNSW LHD. Of this total, 3,554 lived within the Tweed LGA accounting for 4% of the Tweed LGA population and accounting for 26 % of the total NNSW LHD Aboriginal population and 625 lived within the Byron LGA accounting for 2% of the Byron LGA population and accounting for 5 % of the total NNSW LHD Aboriginal population.

In 2011 Aboriginal people accounted for 2.9% of the total NSW population and 3% of the Australian population. The number of Aboriginal people within Tweed LGA is significantly higher than both the State and Australian rates. The numbers of Aboriginal people are anticipated to increase at a higher rate than the non-Aboriginal population over the next decade.

[8] *Queensland Government Population Projections 2011 edition (medium series), Office of Economic and Statistical Research, Queensland Treasury*

The Aboriginal population is considerably younger than the non-Aboriginal population. In 2011, the median age for this population was 21 years, 16 years less than the national median age of 37.2 years. More than one in three (35.9%) Aboriginal people were aged less than 15 years, while just 3.8% were aged 65 years and over. The Aboriginal population is disadvantaged across all domains of wellbeing compared to their non-Aboriginal counterparts.[9]

4.8 Births and Fertility Rates

The following table shows that in 2004/05 women from the Tweed Byron Health Service Group were responsible of 47% of all births within the NNSW LHD catchment. The number of births in the Tweed Byron Health Service Group decreased 2% from 2004/056 to 2014/15 from 1,521 births in 2004/05 to 1,492 births in 2014/15.

Table 3: NNSW LHD and Tweed LGA Births 2005/06 - 2013/14

LGA	2004/05	2009/10	2014/15	2004/05 – 2009/10 % Change	2009/10 - 2014/15 % Change
	Births	Births	Births		
Tweed	999	1535	1245	54	-19
Murwillumbah	394	127	122	-68	-4
Mullumbimby	128	145	125	13	-14
TBHSG	1521	1807	1492	19	-17
Total NNSW LHD	**3217**	**3655**	**3047**	14	-16

Source: FlowInfo Version 15.0 NSW MoH SRG Obstetrics, Vaginal and Caesarean Delivery

Fertility rates in Table 4 indicates fertility rates have decreased between 2011 and 2014 across NNSW LHD, NSW and the Tweed LGA with the exception of the Byron LGA which indicates a marginal increase of 0.04%.

Table 4: Fertility Rate Comparison –Tweed, Byron and NSW 2011-2014

LGAs	Fertility Rates		Change
Catchment	2011	2014	
Tweed	2.23	2.01	-0.22
Byron	1.85	1.89	0.04
NNSW LHD	**2.38**	**2.08**	**-0.30**
NSW	**1.99**	**1.87**	**-0.12**

Source: ABS 3301.0 Fertility Rates Australia 2014. Viewed 24/8/16
http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/3301.02014?OpenDocument

4.9 Access to Antenatal Care

Data available on access to antenatal care was sourced by the North Coast Public Health Unit from HealthStats NSW. The data is only available at LHD level and for pregnant women receiving antenatal care before 20 weeks' gestation. In 2013, 83.3% of Aboriginal women and 89.7% of non-Aboriginal women who were booked into NNSW LHD services received antenatal care before 20 weeks' gestation. In 2014, 82.6% of Aboriginal women and 92.6% of non-Aboriginal women who were booked into NNSW LHD services received antenatal care before 20 weeks' gestation. In 2013 in NSW 84.7% of non-Aboriginal women and 74.2% of Aboriginal women received antenatal care before 20 weeks' gestation and in 2014, 85.4% of non-Aboriginal women and 76.8% of Aboriginal women received antenatal care before 20 weeks' gestation.

[9] *ibid*

4.10 Socio-Economic Status – SEIFA Index

Economic status is closely associated with health and wellbeing. People who are economically disadvantaged experience poorer health than economically advantaged people. NNSW LHD is one of the most disadvantaged LHDs in NSW with all LGAs scoring lower than the NSW average on most measures of socio-economic status.

The overall level of socio-economic disadvantage in the Northern NSW region contributes to higher than average levels of health problems and demand for services. All LGAs within NNSW LHD score lower than the NSW score on most measures of socio-economic status. The Tweed LGA had a SEIFA score of 949 in 2011 which places it below the average for NSW and around the mean for Northern NSW.

Table 5: SEIFA Indices for NNSW LHD LGAs 2011

LGA		Score	Rank within Aus.	Rank within NSW
10250	Ballina (A)	980	343	99
11350	**Byron (A)**	**979**	**340**	**98**
17550	**Tweed (A)**	**949**	**227**	**68**
14850	Lismore (C)	946	216	66
11730	Clarence Valley (A)	907	76	13
17400	Tenterfield (A)	907	77	14
14550	Kyogle (A)	902	70	11
16610	Richmond Valley (A)	888	56	7
17200	Sydney (C)	1051	504	130
	Australia overall	**1000**		

Source: Australian Bureau of Statistics Series No.2033.0.55.001 - Census of Population and Housing: Socio-Economic Indexes for Areas (SEIFA), Australia, 2011. Latest issue released 28/3/2013

4.11 Smoking During Pregnancy

Smoking is the most important preventable cause of adverse outcomes in pregnancy. However, most smokers who become pregnant continue to smoke and most of those who quit relapse after delivery. Smoking in pregnancy rates for NNSW LHD LGAs and NSW are detailed in the table below. The smoking rate in Tweed LGA is higher (15%) when compared to NSW (9.8%) and Byron (9.0%). It is important to note however that in 2014 it was reported that 45% of Aboriginal women residing in NNSW LHD smoked during pregnancy and 43.6% of NSW Aboriginal women.

Table 6: Smoking Rates 2014 by NNSW LHD LGAs and NSW

LGA	% Smoking during pregnancy
Ballina	14.0
Byron	**9.0**
Clarence Valley	24.0
Kyogle	25.0
Lismore	19.0
Richmond Valley	24.0
Tweed	**15.0**
New South Wales	**9.8**

Source: NSW Perinatal Data Collection (SAPHaRI). Centre for Epidemiology and Evidence, NSW Ministry of Health access 27 February 2016

4.12 Low Birth Weight[10]

Low birth weight is a term used to describe babies who are born weighing less than 2,500 grams. Low birth weight is mostly caused by premature birth (being born before 37 weeks). Another cause of low birth weight is a condition called intrauterine growth restriction. This occurs when a baby does not grow well during pregnancy because of problems with the placenta, the mother's health or the baby's health. The low birth weight rate in the Tweed Byron Health Service Group is quite low i.e. Tweed 5.1% and Byron 3.4%. The NNSW LHD rate is 5.2%; NSW 6.1% and Australia 6.5%.

4.13 Immunisation Rates

Immunisation is the most significant public health intervention in the last 200 years, providing a safe and efficient way to prevent the spread of many diseases that cause hospitalisation, serious ongoing health conditions and sometimes death. Since the introduction of vaccination for children in Australia in 1932, deaths from vaccine-preventable diseases have fallen by 99 per cent, despite a threefold increase in the Australian population over that period. Worldwide, it has been estimated that immunisation programs prevent approximately three million deaths each year.

Immunisation is critical for the health of children and the wider community. For immunisation to provide the greatest benefit, a sufficient number of people need to be vaccinated to halt the spread of bacteria and viruses that cause disease - a phenomenon called 'herd immunity'. The proportion of the population that has to be immune to interrupt disease transmission differs for each vaccine preventable disease, but is around 90 per cent for most diseases. For a highly infectious disease like measles, this is up to 95 per cent of the population. This emphasises the need to stay vigilant and ensure high coverage rates are achieved, not only at the national level, but also at the local level.

In Australia, immunisation coverage rates for children are generally high, with over 90 per cent of children fully immunised at 1, 2 and 5 years of age. This high rate of immunisation helps to maintain community immunity, especially for those who are too young to be immunised or those that are not able to be immunised for medical reasons. Without herd immunity, rare diseases will become common again, causing more illness and deaths.

The target for immunisation in Australia and NSW is 95% of children fully immunised at 1 and 5 years of age. The immunisation rate[11] i.e. children fully immunised at 1 year is 89% in the Tweed LGA however the immunisation rate for children aged 1 year is significantly lower (72%) in Byron LGA. There is some evidence that recent changes to Commonwealth Government policy have provided a stimulus to some parents to seek age appropriate immunisation.

4.14 Tweed Byron Health Service Group Maternity Services Demand

There were a total of 1,081 separations from public hospitals for ESRG 722 Vaginal delivery and 723 Caesarean deliveries for Tweed Byron Health Service Group residents in 2013/14. Analysis of Tweed and Byron LGA residents' total demand for (public and private) birthing services in 2013/14 shows that Tweed Byron Health Service Group public hospitals met 94% of service needs. The Tweed Hospital provided 69%, Murwillumbah District Hospital provided 13% and Mullumbimby and District War Memorial Hospital provided 12% of total services locally to Tweed Byron Health Service Group residents. A further 3% of

[10] *Centre for Epidemiology and Evidence; Health Statistics New South Wales. Sydney: NSW Ministry of Health. Available at: www.healthstats.nsw.gov.au Accessed 17 February 2016*

[11] *Centre for Epidemiology and Evidence; Health Statistics New South Wales. Sydney: NSW Ministry of Health. Available at: www.healthstats.nsw.gov.au Accessed 17 February 2016-Total for -2015*

resident separations were from Lismore Base Hospital and 3% from Queensland Hospitals. There was one separation recorded from a private hospital in NSW however data for private hospitals in Queensland is not available.

The table below details demand for Vaginal and Caesarean deliveries for Tweed Byron Health Service Group by place of residence (postcode) for 2013/14 and place of care.

Table 7: Separation for Vaginal and Caesarean Delivery 2013/14 by Postcode of Residence and Place of Care

Hospital/ Catchmnet	Place of Care						
	Lismore	Mullumbimby	Murwillumbah	Other	Queensland	The Tweed	Total
Byron Central Hospital							
2479 Bangalow	15	13	0	0	0	4	32
2480 Clunes	2	5	0	0	0	1	8
2481 Byron Bay, Ewingsdale, Suffolk Park, Broken Head	13	36	2	0	1	54	106
2482 Mullumbimby and Hinterland	1	28	1	0	0	19	49
2483 Brunswick Heads, Ocean Shores and Surround	3	39	6	0	2	64	114
The Tweed Hospital							
2485 Tweed Heads and Tweed Heads West	1	1	2	0	6	97	107
2486 Terranora, Tweed Heads	0		26	1	8	229	264
Murwillumbah District Hospital							
2484 Murwillumbah	0	1	54	1	6	114	176
2487 Stotts Creek	1	0	15	0	4	73	93
2488 Bogangar, Cabarita Beach, Tanglewood	0	0	8	0	1	26	35
2489 Pottsville, Hastings Point	1	5	17	0	1	59	83
2490 Tumbulgum North Tumbulgum	0	0	4	0	0	10	14
Total	**37**	**128**	**135**	**2**	**29**	**750**	**1,081**

Source: FlowInfo Version 14.0 NSW MoH SRG Obstetrics, ESRG 722 Vaginal and ESRG 723 Caesarean Delivery

As can be seen in the table below there were only 58 discharges under the care of Obstetrics Specialty from Gold Coast University Hospital for Tweed Byron Health Service Group residents in 2014/15. Of these 30 were for vaginal and caesarean delivery. There has been growth in activity for these residents at Gold Coast University Hospital between 2010/11 and 2014/15. YTD activity between 1 July and 31 December 2015 for Obstetrics Specialty is 28 discharges.

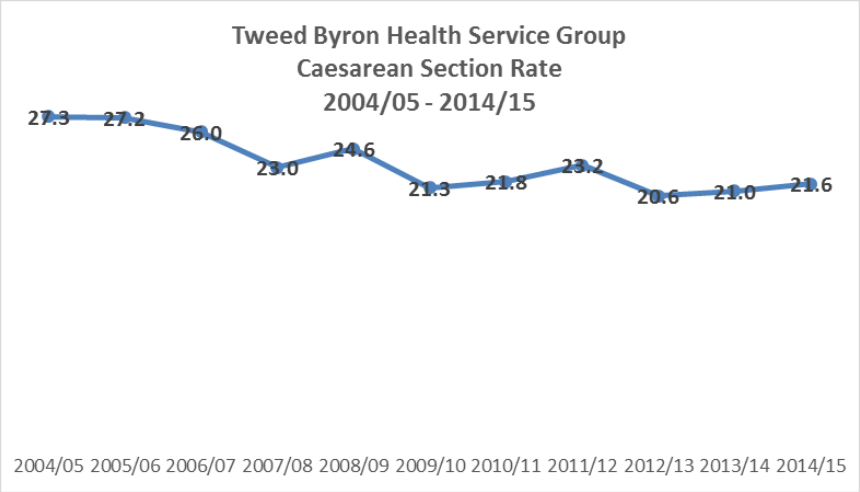
Table 8: Discharges by Separation for Obstetric Specialty from GCUH 2010/11-2014/15 at GCUH for NNSW Residents

Obstetric Type	2010/11	2011/12	2012/13	2013/14	2014/15	YTD 2015-16
Tweed LGA Residents						
Vaginal Delivery	10	11	12	18	20	7
Caesarean Delivery	1	6	4	5	8	7
Total Births	**11**	**17**	**16**	**23**	28	14
Antenatal	7	16	6	8	13	10
False Labour	1	3	0	8	0	0
Abortion_ Ectopic_ Postpartum	2	3	3	1	8	0
Other DRG Discharges Obstetrics	0	2	0	2	2	0
Total Obstetrics Tweed LGA	**21**	**41**	**25**	**42**	**51**	24
Byron LGA Residents						
Vaginal Delivery	1	1	0	3	0	0
Caesarean Delivery	0	1	1	1	2	0
Total Births	**1**	**2**	**1**	**4**	2	0
Antenatal	2	1	1	0	3	3
Abortion_ Ectopic_ Postpartum	0	0	0	2	2	1
Total Obstetrics Byron LGA	**3**	**3**	**2**	**6**	**7**	**4**
Total Obstetrics Tweed Byron HSG	**24**	**44**	**27**	**48**	**58**	**28**

Source: Gold Coast Health Service Strategy and Health Service Planning HBCIS April 2016

The caesarean section rate for the Tweed Byron Health Service Group fell from 27.3% to 21.6% in 2014/15 excluding separtions from private hospitals in Queensland. This is in line with NSW Health Policy *Maternity - Towards Normal Birth in NSW.*

Chart 1: Caesarean Section Rate Tweed Byron Health Service Group Residents 2004/05-2014/15



Source: FlowInfo Version 15.0 NSW MoH SRG Obstetrics, ESRG 722 Vaginal and ESRG 723 Caesarean Delivery

5. CURRENT SERVICE OVERVIEW

The Tweed Byron Health Service Group forms a network of clinical services which are linked through a formal management structure. Service networking is well established, this has been supported through a developing medical governance model with Directors of Emergency Medicine, Paediatrics and Obstetrics appointed to facilitate service integration and appropriate delineation of roles.

There are currently four public hospitals in the Tweed Byron Health Service Group. These include The Tweed Hospital, Murwillumbah District Hospital, Mullumbimby and District War Memorial Hospital and Byron District Hospital. A new Central Hospital for Byron Shire is currently under construction at Ewingsdale close to the Pacific Highway. The new facility will replace Byron District and Mullumbimby and District War Memorial Hospitals. The Tweed Hospital is located 30km from Murwillumbah District Hospital (EDT[12] of 20min). The distance between the proposed Byron Central Hospital and The Tweed Hospital will be approximately 59km (EDT 35min).

Within the Health Service Group, The Tweed Hospital, a B2 Major Non-Metropolitan Hospital, is the main public referral hospital for residents of Tweed and Byron LGAs in Northern NSW and several southern Gold Coast SLAs in Queensland. The Tweed Hospital predominantly provides services at role delineation level 5.

The Tweed Hospital has 212 Overnight inpatient beds, including a 25 bed specialist Mental Health Unit, Maternity, Special Care Nursery, and Paediatrics, Medical including six palliative care beds, Surgical, Intensive Care Unit (ICU), Coronary Care Unit (CCU) and High Dependency Unit (HDU). The Tweed Hospital provides level 5 Emergency Medicine, Operating Theatres, In-Centre Renal Dialysis, Haematology, Outpatients including Chemotherapy, Labour and Delivery rooms and Outpatient consulting rooms. A $47M redevelopment of The Tweed Hospital is currently in the planning stage.

Maternity Services at The Tweed Hospital are provided at role delineation level 5 and supported by level 4 Neonatal Services. Maternity Services are provided by Specialist Obstetricians, Midwives, Registrars and Resident Medical Officers in the inpatient, outpatient and community settings. There are Outpatient Obstetrics/Gynaecology Clinics operating for normal and high risk pregnancies and other specialist services such as Endocrinology. The Clinical Director Obstetrics and Gynaecology and Paediatrics are based at The Tweed Hospital and have a Health Service Group wide responsibility.

The new Byron Central Hospital operates as a peer group category “C2” District Group Hospital replacing the existing Byron District and Mullumbimby and District War Memorial Hospitals (which were D1 group category). Byron Central Hospital provides a range of acute and sub-acute inpatient services at role delineation level 2 with some core services increased to role delineation level 3. Transfer of the existing normal risk birthing unit from Mullumbimby and District War Memorial Hospital will offer maternity services at level 2 role delineation and newborn services at level 1 operating as Byron Community Birthing Service. The service provides a normal risk midwifery group practice model and a shared care model in collaboration with GPs. Only healthy women with normal risk pregnancies are cared for under this model at Byron Central Hospital and all other patients are referred to The Tweed Hospital and occasionally a tertiary facility.

A co-located Ambulatory Care Unit with the capacity for 24 different consulting clinics offers services to the community by visiting medical services, Allied Health and Community Health. Enhancement of the public

[12] *EDT = Estimated Driving Time*

Oral Health Unit to four chairs will sit alongside the Ambulatory Care Unit. A new satellite Cancer Care and Haematology Unit will provide day only treatments in four dedicated therapy chairs.

There is a new 20 bed non-acute inpatient mental health unit included in Byron Central Hospital which will assist patient flow across the Mental Health stream and support the transition back into the community.

Murwillumbah District Hospital provides a 24 hour ED which is staffed by Career Medical Officers (CMOs) and Registrars (and Locums as required). Specialists are Network appointments and GP Visiting Medical Officers (VMOs) provide 24-hour medical cover for inpatients. A range of clinical support services are available on-site 24 hours a day including medical imaging, pathology, pharmacy and high dependency beds. Paediatric inpatient services are also available at role delineation level 3.

Level 2 Maternity and level 1 Newborn Services are also provided at Murwillumbah District Hospital. In early November 2009 a midwifery led model of care was introduced and now operates as Tweed Valley Birthing Service. Only healthy women with normal risk pregnancies are treated under this model at Murwillumbah District Hospital and all other patients are referred to The Tweed Hospital. Caesarean sections are no longer performed at Murwillumbah District Hospital and overnight inpatient beds closed on 29 November 2015. Patients requiring higher level care are booked to birth at The Tweed Hospital and occasionally a tertiary facility.

5.1 Regional Services

The Tweed Hospital forms the hub for the majority of specialist medical, surgical and other services within the Tweed Byron Health Service Group. It is the only facility in the Tweed Byron Health Service Group that provides emergency operating theatres for all surgery, intensive care, coronary care, acute mental health and a range of diagnostic services available 24 hours a day.

5.2 Cross Border Services

Sharing a border with Queensland is a major challenge for the planning and delivery of health services in the Tweed Byron Health Service Group. Queensland residents from the southern end of the Gold Coast access Tweed Valley services, and the Gold Coast Hospital and Health Service recognises that The Tweed Hospital will continue to provide health services to that population into the future. Queensland residents from the southern end of the Gold Coast include those living in the SLAs of Coolangatta, Currumbin-Tugun, Currumbin Valley-Tallebudgera, Currumbin Waters and Palm Beach.

There are also other hospital services located just over the Queensland border. The closest is the John Flynn Private Hospital - 10km (EDT of 10min). Gold Coast Hospital Robina Campus is 25km away (EDT of 20min) and the Gold Coast University Hospital - 42km distant (EDT of 35min). Pindara Private Hospital is also located in southern Queensland.

The new Gold Coast University Hospital opened in September 2013. Gold Coast University Hospital is a specialist hospital that is equipped with the latest technology to assist staff to provide the highest level of care and comfort to patients. It forms part of the Queensland Government's new Gold Coast Health and Knowledge Precinct planned for the area and is three times the size of the former Gold Coast Hospital.

Gold Coast University Hospital is now providing new and extended specialised services to treat more patients on the Gold Coast, where they were previously required to travel to facilities outside the Gold Coast such as Princess Alexandria Hospital in Brisbane. For residents of Northern NSW and the Gold Coast, opening of the new hospital brings these highly specialised services closer to home.

The Gold Coast University Hospital is now the main tertiary referral hospital for Tweed Byron Health Service Group residents. The Hospital provides a Maternal and Fetal Medicine Unit to support complex pregnancies

and a tertiary Neonatal Intensive Care Unit with nine cots delivering care to babies from 24 weeks' gestation; the Neonatal Intensive Care Unit is supported by a 20 cot Special Care Nursery. The recent expansion of the Gold Coast University Hospital Paediatric Surgical Services has made it possible for neonates to access surgery for complex conditions e.g. gastroschisis without transfer to Brisbane.

5.3 Role Delineation

Role delineation is a process which determines that support services, staff profile, minimum safety standards and other requirements are provided to ensure that clinical services are provided safely and appropriately supported. The role of a service describes the complexity of the clinical activity undertaken by that service, and is chiefly determined by the presence of medical, nursing and other health care personnel who hold qualifications compatible with the defined level of care. Identification of appropriate role delineation of services is an important step in determining the future role and capacity of The Tweed Hospital that will support contemporary models of care. The current role delineation levels for Maternity and Newborn Services in the Tweed Byron Health Service Group are detailed in the table below:

Table 9: Current Role Delineation Maternity and Neonatal Services

Hospital	Service	Role Delineation Level
Murwillumbah District Hospital and Byron Central Hospital	Maternity Services	2
Murwillumbah District Hospital and Byron Central Hospital	Neonatal Services	1
The Tweed Hospital	Maternity Services	5
The Tweed Hospital	Neonatal Services	4

Source: NSW Health Guide to the Role Delineation of Clinical Services 2016

Proposed Role Delineation Table

Future role delineation levels for Maternity and Newborn Services were reviewed by the Steering Committee and it was agreed that there would be no change to role delineation levels.

5.4 Tweed Byron Health Service Group Maternity Services Activity

The table below details separations for SRG Obstetrics from Tweed Byron Health Service Group facilities between 2011/12 and 2014/15.

Table 10: Separations for SRG Obstetrics Tweed Byron Maternity Services 2011/12-2014/15

Hospital & ESRG	2011/2012	2012/2013	2013/2014	2014/2015	% Change 2011/12 - 2014/15
Mullumbimby	**194**	**179**	**179**	**156**	**-20**
Antenatal admission	17	31	17	23	35
Postnatal admission	22	11	8	8	-64
Vaginal delivery	155	137	154	125	-19
Murwillumbah	**404**	**403**	**391**	**292**	**-28**
Antenatal admission	54	43	60	36	-33
Caesarean delivery	67	72	62	42	-37
Postnatal admission	171	177	173	134	-22
Vaginal delivery	112	111	96	80	-29
Tweed Heads	**2,087**	**2,015**	**1,872**	**1,655**	**-21**
Antenatal admission	440	365	356	284	-35
Caesarean delivery	335	330	318	293	-13
Postnatal admission	124	126	111	126	2
Vaginal delivery	1,188	1,194	1,087	952	-20
Grand Total	**2,686**	**2,599**	**2,445**	**2,104**	**-22**

Source: FlowInfo Version 15.0 NSW MoH SRG Obstetrics

There were a total of 2,104 separations for SRG Obstetrics from The Tweed, Mullumbimby and District War Memorial and Murwillumbah District Hospitals in 2014/15. The majority of these (79%) were from The Tweed Hospital. There was a 22% decline in the number of separations for SRG Obstetrics between 2011/12 and 2014/15.

There were a total of 343 separations for antenatal care from Tweed Byron Health Service Group Maternity Services in 2014/15. The majority (83%) of these were from The Tweed Hospital.

In 2014/15 the majority of separations for postnatal care (50%=268) were recorded at Murwillumbah District Hospital however Murwillumbah District Hospital no longer provides inpatient postnatal care.

In 2014/15 there were 1,492 births i.e. separations for ESRG 722 Vaginal delivery and ESRG 723 Caesarian delivery from The Tweed, Mullumbimby and District War Memorial and Murwillumbah District Hospitals. The majority of these separations (83%) were from The Tweed Hospital (n=1,245). There were 122 separations from Murwillumbah District Hospital, (8%). There were a further 125 separations from Mullumbimby and District War Memorial Hospital (8%). Separations for birthing declined by 20% from 2011/12 to 2014/15.

Of the 1,245 births at The Tweed Hospital in 2014/15 a total of 490 (39%) were for residents of the Gold Coast and other areas of Queensland. The number of births for Queensland residents fell by 138 (22%) between 2013/14 and 2014/15. This appears to be related to the opening of new birthing facilities at the Gold Coast University Hospital. Of the 1,245 births at The Tweed Hospital in 2014/15 a total of 66 (5.2%) were for Aboriginal mothers.

5.5 Supply Modelling Acute Inpatients

Future requirements for acute overnight and same day maternity services in the Tweed Byron Health Service Group has been projected to 2017, 2022 and 2027 using the acute Inpatient Modelling Tool (aIM2012) developed for the NSW Ministry of Health. The modelling tool takes account of projected population growth and ageing, NSW age and sex specific trends in length of stay and separation rates for Enhanced Service Related Groups (ESRGs) in the development of projections for inpatient separations and beddays.

The aIM tool uses current actual activity and flow patterns as the baseline for projections and assumes a gradual trend towards the State-wide level of utilisation for each ESRG. In calculating bed requirements, a bed occupancy rate of 85% is used for maternity beds. Projections, assumptions and targeted flow reversals are detailed in the relevant sections of the Plan.

6. Review of Service Delivery

6.1 Tweed Byron Health Service Group Maternity and Newborn Services

In NSW, Maternity and Newborn Services are classified according to the level of care needed and type of service available. The NSW Guide to the Role Delineation of Health Care Services provides risk categories for maternity patients relating to appropriate level of care required for various maternal risk categories at the intended place of delivery.

PD2010_022 National Midwifery Guidelines for Consultation and Referral establishes the requirement that all midwives providing maternity care utilise the *Australian College of Midwives (ACM) National Midwifery Guidelines for Consultation and Referral.* The ACM Guidelines describes the parameters for identifying normal risk pregnancy and supports midwives to make appropriate consultation and referral to other clinicians and allied health staff if risk factors arise in pregnancy. The policy recognises that safe maternity care is reliant on robust systems and processes. This includes careful risk assessment with pathways for escalation to an appropriately role delineated service.

Within the Tweed Byron Health Service Group there is a tiered network arrangement where the lower role delineated services will refer to The Tweed Hospital. This is a well-articulated process and is arranged facility to facility based on risk identification. The Tweed Hospital offers a level 5 birthing service and level 4 neonatal service (Special Care Nursery) staffed by specialist Obstetricians, Paediatricians, Registrars and Midwives. The Byron Central Hospital and The Tweed Valley Birthing Service offer level 2 birthing services supported by a level 1 neonatal service. These services provide a continuity of care model for normal risk pregnant women who are allocated a known midwife who provides individualised care and follows through her antenatal, intrapartum and early postnatal journey.

6.2 Antenatal Care

The purpose of antenatal care is to prevent or identify and treat conditions that may threaten the health of the fetus/newborn and/or the mother and to help a woman approach pregnancy and birth as a positive experience.

Antenatal care is a routine part of pregnancy. Women receive antenatal care in community and hospital-based settings and see a range of health professionals. In the Tweed Byron Health Service Group the model of care focuses on the individual woman's needs and preferences, partnership and continuity of care. In line with *Maternity - Towards Normal Birth in NSW* the philosophy of the service encompasses a woman-centred approach ensuring that a woman's social, emotional, physical, psychological, spiritual and cultural needs and expectations are considered and respected. Throughout the pregnancy, women are given information to support them in making choices about their care.

As soon as a woman is pregnant they need to see their GP or midwife ideally when they are around 10 weeks pregnant. NSW Health recommends that women book into the hospital as soon as their GP or midwife confirms their pregnancy. Ideally women who choose to have their babies in a public hospital or birth centre have their first antenatal visit between weeks 10 and 16.

Women need to be aware of the range of services available so that they can make an informed choice in consultation with their GP or midwife as to the model of care they would prefer for the birth of their baby and to understand the range of services available; in the event that requirements for them or their baby's care become more complex. Women are also able to self-refer to the Byron Community Birthing Service and the Tweed Valley Birthing Service.

Antenatal care within the Tweed Byron Health Service Group is provided by Midwives, specialist Obstetricians/Gynaecologists and Registrars. Paediatric Clinics are also provided by specialist Paediatricians and Registrars at The Tweed and Murwillumbah District Hospitals.

Maternity services are classified according to the level of care needed and type of service available. Women are generally referred to the birthing service (depending on the level of risk of the pregnancy) closest to where they live. In the Tweed Byron Health Service Group specialist birthing and neonatal services are only available at The Tweed Hospital. Tertiary facilities are available at the Gold Coast University Hospital and some hospitals in Brisbane.

Under the Midwifery Group Practice or Shared Care model midwives and/or GPs provide care for women during normal risk pregnancies, labour and birth in either birth centres at Murwillumbah District Hospital or Byron Central Hospital or at home (if the woman has chosen to have a homebirth). While Byron Community Birthing Service provides a shared care model where GPs may be involved throughout the pregnancy and birth, the Tweed Valley Service provides a shared care model with GPs during the antenatal period only.

If arrangements are made to book the woman into the Byron Community Birthing Service or Tweed Valley Birthing Service a midwife provides antenatal care throughout their pregnancy. The midwife will refer a woman to a doctor if she develops an identified risk factor during her pregnancy. They are referred to an Antenatal High Risk Clinic where they will be seen by a specialist Obstetrician or Register. Referral to a Paediatrician is available at The Tweed Hospital if required.

Women who are booked to birth at The Tweed Hospital may attend the Murwillumbah District Hospital or The Tweed Hospital Antenatal Clinic depending on geographical boundaries. Women may attend the Murwillumbah District Hospital for a 'booking-in' visit only and continue their antenatal care at The Tweed Hospital or their care may continue at Murwillumbah District Hospital.

All women birthing at The Tweed Hospital attend a medical review appointment with an Obstetrician/ Obstetric Registrar, regardless of risk factors. For women with normal risk pregnancies birthing at The Tweed Hospital, antenatal care is provided by a hospital based Midwife/GP Shared Care program. This first antenatal visit (booking in) includes a comprehensive medical and psycho-social assessment and allows the midwife to triage the woman into the most appropriate model of care.

Women with identified risks are booked to birth at The Tweed Hospital and occasionally a tertiary facility. Antenatal Clinics (identified risk) are provided by specialist Obstetricians and/or Registrars depending on the level of a woman's pregnancy risk at both Murwillumbah District and The Tweed Hospitals. Referral to a Paediatrician is also made if required. The 'at risk' Doctor Clinic works collaboratively with Byron Central Hospital to provide antenatal care for women falling outside their 'normal risk' criteria. These women will birth at The Tweed Hospital or occasionally a tertiary centre.

Antenatal Clinics, Gynaecology Clinics and other outpatient services operate from the Outpatient Departments at Murwillumbah District Hospital and The Tweed Hospital. An Early Pregnancy Assessment Service (less than 20 weeks' gestation) is available at The Tweed Hospital as well as an Obstetric Risk Assessment Clinic.

At Murwillumbah District Hospital ambulatory care services are also provided at the Women's Care Unit. Services include cardiotocograph monitoring, Anti-D administration and immunisation; State Wide Infant Screening – Hearing (SWISH) hearing tests for neonates; transfusions and infusion of blood products.

There are plans to renovate the former maternity inpatient ward area at Murwillumbah District Hospital to accommodate Maternity Ambulatory Care services and increase the outpatient clinic space. The current

outpatient clinics are located on the ground floor and comprise three rooms. The Cancer Care (Oncology) Department is also used for some clinics when needed as an overflow area.

At The Tweed Hospital a Day Assessment Unit is available within the Women's Care Unit. Women who require review or short intervention can be seen by appointment by the Midwife and/or Registrar for minor obstetric complaints such as decreased fetal movements requiring CTG tracings, BP check, spontaneous rupture of membranes review and speculum examination, post-dates information and preparation for induction of labour including sweeping of membranes.

The Aboriginal and Maternal Infant Health Service (AMIHS) is a culturally appropriate maternity service for Aboriginal mothers, babies and families. In the past the AMIHS based in Ballina provided outreach services to Aboriginal women who resided in Byron Shire however it was reported that this service is no longer available. There is no designated service in the Tweed Shire.

Across the Health Service Group Community and Allied Health Service Social Workers work in close collaboration with Midwives and Antenatal Clinics. There are established referral pathways for SAFE START, Social Work, and Diabetes Educator, Mums Using Methadone and other Substances (MUMS) Program and Physiotherapy. Allied Health staff are available for referral service to all women and babies.

6.2.1 Gynaecology Clinics

Gynaecology Clinics are provided at The Tweed and Murwillumbah District Hospitals. The Gynaecology Clinic Nurse Coordinator works across both Murwillumbah District and The Tweed Hospitals. The Tweed Hospital Clinic is staffed by The Tweed Hospital Registered Nurse/Registered Midwife floated from the Women's Care Unit. The Gynaecology Clinic is an approved Mirena training facility for the Family Planning Association of Queensland. Local GPs undertake the practical component of their course at the Clinic. Preconception advice is also provided.

Gynaecology Clinics are networked with The Tweed Hospital. All gynaecology patient referrals are received at Murwillumbah District Hospital where they are triaged by the Gynaecologist. Appointments are made for The Tweed Hospital and Murwillumbah District Hospital by Murwillumbah clerical staff, depending on triage category, clinical need, place of residence and transport availability. There is also a Gynaecology Oncology Clinic at The Tweed Hospital Outpatient Department staffed by a specialist Gynaecology Oncologist.

Antenatal and Gynaecology Non-Admitted Patient Activity

As can be seen in the table below in 2014/15 there were 9,954 Non Admitted Patient Services (NAPS) reported for Antenatal and Gynaecology Clinics at Murwillumbah District and The Tweed Hospitals. This represents an overall decrease in activity of 7.5% between 2012/13 and 2014/15. However, there has been a considerable increase in activity at Murwillumbah District Hospital and a corresponding decline at The Tweed Hospital reflecting a policy change in relation to the location of the service. Also between June 2014 and February 2016 there was one less Obstetrics/Gynaecology Consultant appointed with inconsistent locum cover which impacted on outpatient activity.

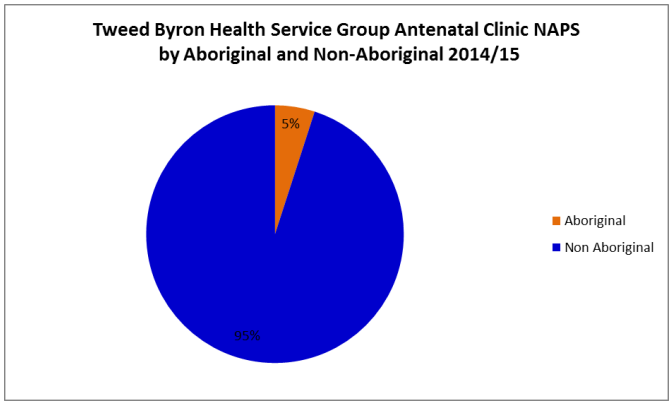
Table 11: Murwillumbah District and The Tweed Hospitals Antenatal and Gynaecology Clinics NAPS 2012/13-2014/15

Hospital/Clinic	2012/13	2013/14	2014/15	% Change 2012/13-2014/15
Murwillumbah District Hospital	**626**	**2,770**	**2,493**	298
Early Preg Midwife Clinic	304	1,489	1,348	343
Gynae Clinic	322	1,281	1,145	256
The Tweed Hospital	**10,132**	**8,122**	**7,461**	- 26
Gynae Clinic	863	1,167	1,155	34
Pre Natal Clinic	9,269	6,955	6,302	- 32
Total	**10,758**	**10,892**	**9,954**	**- 7.5**

Source: Tweed Byron Health Service Group Business Reporting February 2016

In 2014/15, 380 NAPS were provided to Aboriginal women at Murwillumbah District and The Tweed Hospital Antenatal Clinics representing 5% of all NAPS.

Chart 2: Murwillumbah District and The Tweed Hospitals Antenatal Clinic NAPS by Aboriginal and non-Aboriginal 2014/15



Source: Tweed Byron Health Service Group Business Reporting February 2016

Table 12 indicates in 2015/16 there was 10,735 NAPS reported for Antenatal and Gynaecology Clinics at Murwillumbah District and The Tweed Hospitals, an 8% increase in NAPs since 2015/15. The location of the Early Pregnancy Assessment Service has changed to The Tweed Hospital.

Table 12: Murwillumbah District and The Tweed Hospitals Antenatal and Gynaecology Clinics NAPS 2015/16

Hospital/Clinic	2015/16
Murwillumbah District Hospital	**4,430**
Complex Antenatal Clinic	732
Antenatal Clinic	-
Midwife Appointments	2,538
Early Pregnancy Assessment Service	-
Gynae Oncology	-
Gynae Clinic	1,160
The Tweed Hospital	**6,305**
Complex Antenatal Clinic	1,851
Antenatal Clinic	884
Midwife Appointments	2,114
Early Pregnancy Assessment Service	360
Gynae Oncology	91
Gynae Clinic	1,005
Total	**10,735**

Source: Tweed Byron Health Service Group Business Reporting

Workforce

Murwillumbah District Hospital Maternity Ambulatory Care is staffed by:

- 1.0 FTE - Maternity Unit Manager;
- 3.68 FTE (7) Midwives, this includes the Antenatal Clinic Coordinator and the Gynaecology Clinic Coordinators;
- 1.52 FTE - Clerical staff (1.0 FTE in Antenatal Clinic and 0.52 FTE in Maternity Ambulatory Care).

The Tweed Hospital Outpatients Department (Obstetrics and Gynaecology) is staffed by:

- Ward Midwives (rotating);
- 1.0 FTE Antenatal Clinic Coordinator;
- Shared clerical support.

6.2.2 Preparation for Parenthood

The Childbirth and Early Parenthood Education Program provides education, information and support to pregnant women and their partners/support people in the areas of pregnancy, birth and early parenting.

Under the Midwifery Group Practice model antenatal education is provided by the midwives through individual and group sessions. In the Tweed Byron Health Service Group Preparation for Parenthood classes are provided by Community Health. Women accessing the Midwifery Group Practice services may choose to attend antenatal classes as well.

In Byron Shire classes are based on clinical best practice and in conjunction with "Preparing for Birth" Author Andrea Robertson. The focus is on natural, active birth and instinctive parenting and ways to achieve this. In Byron Shire the classes are facilitated by Child and Family Health Nurses/Midwives. The service is working with the Ballina Parent Resource Centre to provide specific support to men in the antenatal period. There are 15 couples in each group and the groups run over 7 weeks. There is a charge of $60 per couple.

In Murwillumbah District Hospital Preparation for Parenthood is facilitated by a Midwife/Lactation Consultant and one session by a Physiotherapist and is a 2 hours per week/7 week antenatal program (costing $60.00 per couple). The program offers Preparation for Parenthood to first time mothers and partners, education about pregnancy and preparation for birth. Classes are also based on clinical best practice and in conjunction with "Preparing for Birth" Author Andrea Robertson.

At The Tweed Hospital the Childbirth and Early Parenthood Education Program has been developed in line with:

- NACE – Competency Standards for Childbirth Early Parenting Educators 2011;
- *Maternity – Towards Normal Birth in NSW*;
- Breastfeeding in NSW – Promotion Protection and Support.

The Childbirth and Early Parenthood Education Program is facilitated by Childbirth Educators from the following specialty areas currently employed by NNSW LHD:

- Midwives –Women's Care Unit;
- Child and Family Health Nurses/Midwives - Community Health;
- Physiotherapists - Community and Allied Health.

The program is promoted through antenatal clinics. Participant numbers are limited to 12 couples for each course (costing $60 per couple). Pregnant women, who are unable to cover the fee for the course, or indicate other specific reasons, can be referred to the Childbirth and Parenting Education Coordinator.

Currently The Tweed Hospital and Murwillumbah District Hospital provide specific education to fathers as part of their preparation for parenthood. This is in collaboration with Men's Workers from "The Family Centre" in South Tweed Heads.

In addition, there is specific education provision for target groups provided by Tweed Community Health that include young pregnant women up to 21 years of age, women who have had a previous caesarean birth and postnatal education for breastfeeding.

6.2.3 Smoking in Pregnancy[13]

Mothers who smoke during pregnancy have higher proportions of babies with poorer perinatal outcomes than mothers who do not smoke.

All pregnant women who book in to the service are asked about smoking behaviours and provided with referrals for the Quitline and can access the Helping U 2 Quit Program. Helping U 2 Quit is a free quit smoking program run by trained Quit Facilitators. These women then have ongoing brief interventions at every visit to assess quitting behaviours.

Women whose baby will identify as Aboriginal are referred to Quit for new life. Quit for new life is a best practice smoking cessation program for women having an Aboriginal baby that aims to address the high rate of smoking during pregnancy and prevent relapse to smoking after birth. The program provides culturally appropriate smoking cessation support to Aboriginal pregnant women and their household members who smoke, including advice, behavioral strategies, referral to Quitline, up to 12 weeks' free nicotine replacement therapy and extended follow-up support.

6.3 Diabetes Services

Tweed Byron Health Service Group Diabetes Services are provided to The Tweed Hospital, Murwillumbah District Hospital and Byron Central Hospital and through Community Health Centres on these sites. Models of care are based on Australian Diabetes in Pregnancy, Australian Diabetes Society, Royal Australian College of General Practitioners and Australian Diabetes Educators Association. Priorities of service include patients/clients with Type 1 Diabetes, Gestational Diabetes Mellitus (GDM) and Type 2 Diabetes on insulin.

Women with existing Type 1 or Type 2 Diabetes Mellitus are referred to the Diabetes in Pregnancy Clinic as a priority and have repeat appointments at this clinic. They are seen one to one with the Diabetes Educator and Dietitian. They often deliver at The Tweed Hospital but may be referred to Gold Coast University Hospital or Mater Mothers if their pregnancy issues are outside the recommended parameters for The Tweed Hospital i.e. for scans or early delivery.

Gestational Diabetes[14] is diagnosed when higher than normal blood glucose levels (BGLs) first appear during pregnancy. Between 3% and 8% of pregnant women will develop gestational diabetes around the 24th to 28th week of pregnancy; however, some may be earlier.

All women diagnosed with GDM are referred to The Tweed or Murwillumbah District Hospitals High Risk Antenatal Clinics and booked to birth at The Tweed Hospital. The Tweed Diabetes Service provides an intake service for all clients residing in the Tweed Byron Health Service Group although some women are directly referred to the Byron Diabetes Educator. A central data base is maintained.

Women residing in the Tweed catchment are assessed and managed at The Tweed Hospital. Those living in the Murwillumbah catchment are initially seen at Murwillumbah Community Health Centre by a Diabetes Educator and Dietician. Weekly or twice weekly reviews are then provided at The Tweed Hospital as this is where these women will birth. Residents of Byron Shire diagnosed with GDM will also be booked to deliver at The Tweed Hospital; however, they can be managed by including review contacts at Byron Central Hospital.

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[13] *http://nnswlhd.health.nsw.gov.au/health-promotion/support-health-professionals/health-professionals-smoking/*

[14] *http://www.healthdirect.gov.au/diabetes-and-pregnancy*

Women who reside north of Currumbin Creek are referred by the Antenatal Clinic to Robina Diabetes Service. Tweed also manages GDMs who are booked to birth at The Tweed Hospital from Robina if the Diabetes Educator is away.

The service is multidisciplinary and provided by the Diabetes Clinical Nurse Consultant, Diabetes Educator, Dieticians, Parenting Educators, Obstetricians and an Endocrinologist. These services are provided through outpatient clinics, in groups or on a one to one basis depending on clinical need. Women are also referred to the Diabetes in Pregnancy Clinic where they are seen by an Endocrinologist (staff specialist), when the need for insulin is determined.

The Diabetes in Pregnancy Clinic is part of a general Endocrine Clinic rather than a separate clinic. Ideally women are seen in the clinic within 1 week of referral however this can be delayed if the Endocrinologist is away as the clinics are cancelled. This contributes, along with the volume of people attending to the delay in consultation.

A Diabetes Dietitian is soon to be appointed at The Tweed Hospital and will coordinate dietetic education throughout the Health Service Group.

Referral is made directly to an Obstetrician if BGLs are unstable and the patient is 36-37/40 week's gestation as they may need to be induced rather than commence insulin.

Contact is made with women with GDM post-delivery at The Tweed Hospital to discuss post GDM Oral Glucose Tolerance Testing.

Current Networking Arrangements and Key Service Partners

Internal linkages include Diabetes Clinical Nurse Consultants, Diabetes Educators, Antenatal Clinics, Endocrinologist, Dieticians, Outpatient Clinics, and Diabetes in Pregnancy Clinic, Dietetic Services and Midwife Services. External linkages include the National Diabetes Services Scheme, GPs and Pharmacists. Key service partners include Murwillumbah and The Tweed Hospital Antenatal Clinics, Robina Diabetes Service, Diabetes Educators at Tweed, Murwillumbah and Byron, Endocrine Team at The Tweed Hospital, Dietitian Services at all Community Health Centres, Midwife Educators at Community Health Centres and GPs.

Current Workforce

The current workforce for the Diabetic Service is:

- FTE Endocrinologist based at The Tweed Hospital;
- An advanced trainee also attends the Diabetes in Pregnancy Clinic;
- 0.4 FTE Diabetes Educator Murwillumbah;
- FTE Diabetes Clinical Nurse Consultant Tweed Heads (also has a Health Service Group Clinical Nurse Consultant role);
- 0.9 FTE Diabetes Educator at Tweed Heads;
- 0.6 FTE Diabetes Educator Byron Shire.

Service Activity

- In 2014 the service saw 104 GDM patients and 29 were on insulin;
- In 2015 the service saw 147 GDM patients and 89 were on insulin;
- 1 January 2016 to 31 March 2016 the service saw 42 GDM patients and 22 were on insulin.

6.4 IDENTIFYING AND SUPPORTING AT RISK GROUPS

PD 2010_017 Maternal and Child Health Primary Health Care Policy identifies a primary health model of care for the provision of universal assessment, coordinated care, and home visiting, by NSW Health's Maternity and Community Health Services, for all parents expecting or caring for a new baby.

A comprehensive assessment process, consistent with the SAFE START model has been implemented in both maternity and early childhood health services across the Tweed Byron Health Service Group. Risk factors and vulnerabilities are determined using a team-management approach to case discussion and care planning and a continuity-of-care model has been implemented. Effective communication systems from maternity and newborn services to early childhood health services are established and Universal Health Home Visiting is implemented, in that every family is offered a home visit by a Child and Family Health Nurse within 2 weeks of the baby's birth. Sustained Health Home Visiting is also available.

6.5 SAFE START[15]

SAFE START is an early identification and intervention initiative. Parenting behaviours critically shape human infants' current and future behaviour. The parent-infant relationship provides infants with their first social experiences, forming templates of what they can expect from others and how to best meet others' expectations throughout childhood and adult life.[16] SAFE START aims to provide equitable and timely access to family-focused assessment and supportive interventions for families with complex problems including substance abuse, mental health issues and/or domestic violence.

The SAFE START model also provides collaborative, multidisciplinary case discussion of family focused health care for pregnant women and families with infants up to 2 years of age. The SAFE START model focuses on early identification of psychosocial risk and depressive symptoms and timely access to appropriate care.

The Policy requires a range of actions by LHDs including but not limited to:

- Ensuring that universal psychosocial assessment and depression screening are implemented in maternity and early childhood health services; including formal adoption of validated tools and domains of psychosocial risk assessment. The purpose of psychosocial risk assessment and depression screening for all women that are expecting or caring for a baby is to embed mental health promotion, prevention and early intervention practice throughout the perinatal period for all families;
- Developing and implementing multidisciplinary, inter-sectorial (multi-agency) intake procedures in Maternity and Child and Family Health settings for the allocation of vulnerable families to the appropriate care pathway; including collaborative care when required;
- Improving mental health service integration with other healthcare providers to improve appropriate mental health assessment for pregnant women and parents who care for an infant up to 2 years of age.

The SAFE START initiative describes the levels of care as determined by risk and complexity:

- Level 1 – Universal – routine care e.g. standard antenatal care;
- Level 2 - Early Intervention and Prevention – ongoing and active follow up e.g. Social Work intervention, day stay clinics, family care centres;

[15] *PD2010_016 SAFE START Strategic Policy*
[16] *Swain et al., 2007*

- Level 3 – Complex needs – coordinated team management e.g. Mental Health case management/problematic substance use/abuse, current or history of domestic violence, current or history of child protection and known to Department of Community Services.

It is envisaged that families may move into and out of the different levels of support as their circumstances change.

At the booking-in appointment midwives ask mandatory questions around domestic violence. This forms part of the SAFE START process in that wherever there are vulnerabilities identified there is a referral made to SAFE START. When the new eMaternity database commences in 2016 the questions will be changed and will be more in depth.

All women are also asked to complete the Edinburgh Depression Scale (EDS) at booking in. The responses and scores from the assessments indicate clinical need and may trigger referral to support services. The EDS is re-administered at 28 weeks' pregnancy if vulnerabilities have been identified and they are referred appropriately as indicated by their assessments.

SAFE START also includes multidisciplinary case discussion meetings which provide all team members with the opportunity to discuss complex clients seek support and develop coordinated care plans and appropriate referrals. SAFE START meetings are held monthly at both The Tweed and Murwillumbah District Hospitals. At both sites they are attended by representatives from Social Work, Child and Family Clinical Nurse Consultant, Child and Family Nurses, Antenatal Clinic Coordinators and MUMs Worker. Mental Health staff attendance is intermittent. Midwifery Group Practice Midwives are included in the program but may not be able to attend every meeting if attending births.

There is a cooperative flow of referrals to a range of services including Allied Health, MUMs and specialist Mental Health Services prior to, during and following the implementation of SAFE START based on clinical need. Referral may also be made to Access to Allied Psychological Services (ATAPS).

6.6 MUMS USING METHADONE AND OTHER SUBSTANCES

The adverse effects on fetal development of alcohol, tobacco and other substances such as psychostimulants and opioids are well known. Women who are pregnant or who may become pregnant are therefore a high priority for interventions to reduce the harms associated with substance use.[17]

MUMS is a free and confidential service for pregnant or post-partum women who use alcohol, tobacco and/or other drugs, and/or are on opioid substitution programs (Methadone/Subutex). The aim of the program is to support women to reduce harm and improve outcomes for themselves and their baby during pregnancy and after birth. The service is based at Tweed Community Health Centre and provides outreach services to pregnant women who intend to deliver at a hospital in the Tweed Byron Health Service Group.

Referrals to MUMS are accepted from any source, but typically come from antenatal clinics or a GP. If a woman decides not to engage with the service, brief intervention and other supports can be offered to her and her existing care team.

MUMS supports strengthening parenting skills and confidence and works to identify areas of need based on ongoing individual and family strengths and needs analysis. The service is coordinated by Clinical Nurse Specialists with Midwifery and Drug and Alcohol expertise. The multidisciplinary team assisting them

[17] *Clinical Guidelines for the Management of Substance Use During Pregnancy, Birth and the Postnatal Period*

includes clinicians from: Child and Family Health, Paediatrics, Obstetrics, Midwifery, Drug and Alcohol, Social Workers and Paediatrics, Allied Health and NGOs.

Due to close proximity to the NSW/Queensland border, it is necessary for the program to work closely with Queensland services to support clients (who reside in Queensland and who are birthing in NSW). Therefore, the MUMS Program has built effective and supportive networks with Queensland Services such as Gold Coast and Mater Mothers Hospitals Child and Family Health, Paediatrics, Mental Health and Alcohol and Other Drugs Service and residential rehabilitation facilities.

Mothers who are part of the MUMS Program are seen by the Case Manager throughout their pregnancy, during admission and postnatally to assist with any problems and to provide support for parents of neonates experiencing Neonatal Abstinence Syndrome.

Due to the many clinicians/services involved in the clients' health episode, it is necessary for MUMS to document and communicate effectively and contemporaneously to keep others informed. This enables the client not to have to repeat history (risk for trauma) as well as provides a picture that health is "coordinated and cohesive", as well as relieving the pressure of clients to be able to recall many details of appointments/purpose etc.

6.7 The Tweed Hospital Women's Care Unit

Maternity and Newborn Services at The Tweed Hospital are provided at role delineation level 5 and supported by level 4 Neonatal Services. The Maternity Unit at The Tweed Hospital has four birthing rooms, one antenatal assessment room (which is frequently used as a birthing room due to capacity issues on the Maternity Unit) 12 dedicated postnatal rooms and eight beds that can be used for gynaecology patients, postnatal patients or general overflow from the ED.

Maternity and Newborn Services are provided by Specialist Obstetricians, Midwives, Registrars and Resident Medical Officers in the inpatient, outpatient and community settings. There is a range of service models designed to meet the needs of women and their families. There is an Outpatient Antenatal Clinic which has access to three to four consulting rooms/offices. A Gynaecology Clinic is held once a week.

Wherever possible, The Tweed Hospital provides networked referral and consultation pathways for appropriate management and escalation of complex cases. This can be challenging if the maternal or fetal risk increases through pregnancy or labour and the woman requires more specialised obstetric services, operating theatres and neonatal intensive care than those available at The Tweed Hospital or within NNSW LHD.

Services offered from the Maternity Unit at The Tweed Hospital include inpatient antenatal, intrapartum and postnatal care. Specifically, this entails the following:

- 24 hour on-site Obstetrical Registrar covering the Birthing Suite;
- 24 hour Phone Advice Service for antenatal, intrapartum and postnatal women;
- Various non-invasive and invasive pain relief methods e.g. warm water, nitrous oxide gas, epidural, spinal anaesthesia, general anaesthetic and sterile water injections;
- State Wide Infant Hearing Screening (SWISH);
- Antenatal Education Classes;
- Support for external Maternal and Child Health Services;
- Allied Heath support including Social Work, Physiotherapy, Speech Pathology and Diabetic Education;
- Mothers Using Methadone and other substances (MUMS) Program;
- Breast feeding/lactation support provided by the Parenthood Educator.

Models of Care

The models of care in the Maternity/Women's Care Unit at The Tweed Hospital include:

- Intrapartum Care**:** Intrapartum care is provided by a Registered Midwife during labour and birth, with a one to one ratio of midwife to each labouring woman. Midwives may care for up to two to three women who have not established in labour and/or provide care for women presenting for outpatient pregnancy assessment;
- Care of bariatric maternity patients at The Tweed Hospital based on clinical condition;
- Medical support is available during business hours and through an after-hours on-call basis for consultation and referral;
- Postnatal Care**:** Women receive inpatient care provided by midwives 24 hours per day, 7 days per week;
- Early Discharge Program: Women wishing to discharge early may access the Early Discharge Program with access to a midwife through phone contact or home visiting for up to 7 days. The service is available to women who reside within a set geographical area from The Tweed Hospital.

Current Networking Arrangements

There is a tiered network arrangement where the lower role delineated services within the Tweed Byron Health Service Group refer to The Tweed Hospital. This is a well-articulated process and is arranged facility to facility and based on risk identification i.e. Byron Central Hospital and Murwillumbah District Hospitals refer to The Tweed Hospital.

The Tweed Hospitals tertiary referral location is Queensland. These hospitals include the Gold Coast University Hospital, Royal Women's Brisbane or Mater Hospital depending on specialised bed availability, reason for transfer via Queensland Retrieval Service (QRS) previously known as QNETS. The Perinatal Advice Line will assist with arrangements and/or advice regarding place and timing of transfer to the tertiary facility. For women who develop high risk obstetric and/or fetal complications at The Tweed Hospital this will mean travelling outside NNSW LHD to level 6 role delineated maternity services with tertiary and neonatal intensive care services located in Brisbane.

The Tweed Community and Allied Health Service Social Workers work in close collaboration with The Tweed Hospital Women's Care Unit and Antenatal Clinics. There are established referral pathways for SAFE START, Social Worker, Diabetes Educator, MUMS and Physiotherapy. Allied Health staff are available for referral service to all women and babies.

In 2013 the opening of the Gold Coast University Hospital initially changed the dynamics of demand for Obstetric Services however southern Queensland patients continue to flow across the border to The Tweed Hospital.

Workforce

Staffing includes:

- 1.0 FTE Level 2 Women's Care Unit and Midwifery Unit Manager;
- 1.5 FTE Clerical/Patient Support;
- 1.0 FTE Clinical Nurse Educator;
- 6.5 FTE Clinical Midwifery Specialists;
- 0.5 FTE Enrolled Nurse, (SWISH Screener);
- 1.0FTE Clinical Midwifery Specialist Early Discharge Program;
- 36.05 FTE Registered Midwives;
- 0.5 FTE Paid Student Facilitator from Southern Cross University.

Current Activity

In 2014/15 there were a total of 1,655 separations for SRG Obstetrics from The Tweed Hospital resulting in 4,344 beddays. Of the total separations in 2014/15, 10% were Day Only and 90% were Overnight. As can be seen in the table below separations for SRG Obstetrics declined by 21% between 2011/12 – 2014/15. Overall all ESRGs decreased except for postnatal admissions. In 2014/15 there were 801 Day Only and Overnight separations for gynaecology resulting in 1,079 beddays. These patients are admitted to the Women's Care Unit.

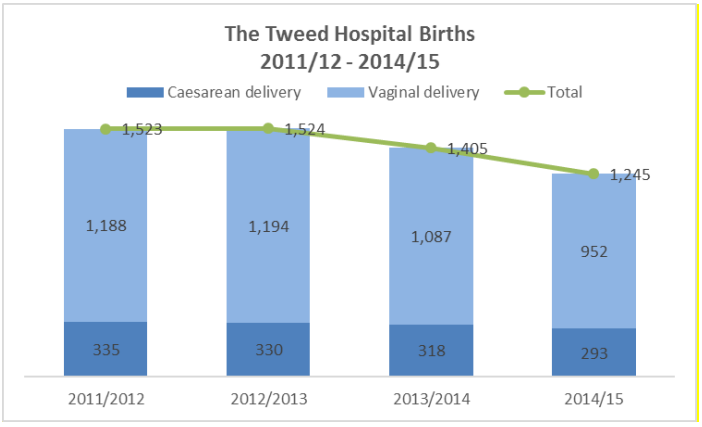
Table 13: The Tweed Hospital Separations for SRG Obstetrics 2011/12 -2014/15

	2011/12			2012/13			2013/14			2014/15			% Change
	Seps	Beddays	ALoS	Seps	Beddays	ALoS	Seps	Beddays	ALoS	Seps	Beddays	ALoS	in Seps
Antenatal admission	**440**	**618**	**1.4**	**365**	**493**	**1.4**	**356**	**459**	**1.3**	**284**	**394**	**1.4**	-35
Day Only	159	159	1.0	123	123	1.0	140	140	1.0	115	115	1.0	-28
Overnight	281	459	1.6	242	370	1.5	216	319	1.5	169	279	1.7	-40
Caesarean delivery	**335**	**1,376**	**4.1**	**330**	**1,422**	**4.3**	**318**	**1,443**	**4.5**	**293**	**1,208**	**4.1**	-13
Day Only	1	1	1.0	0	0		2	2	1.0	7	7	1.0	600
Overnight	334	1,375	4.1	330	1,422	4.3	316	1,441	4.6	286	1,201	4.2	-14
Postnatal admission	**124**	**248**	**2.0**	**126**	**264**	**2.1**	**111**	**264**	**2.4**	**126**	**274**	**2.2**	2
Day Only	7	7	1.0	11	11	1.0	10	10	1.0	8	8	1.0	14
Overnight	117	241	2.1	115	253	2.2	101	254	2.5	118	266	2.3	1
Vaginal delivery	**1,188**	**3,060**	**2.6**	**1,194**	**3,082**	**2.6**	**1,087**	**2,841**	**2.6**	**952**	**2,468**	**2.6**	-20
Day Only	69	69	1.0	65	65	1.0	60	60	1.0	43	43	1.0	-38
Overnight	1,119	2,991	2.7	1,129	3,017	2.7	1,027	2,781	2.7	909	2,425	2.7	-19
Total	**2,087**	**5,302**		**2,015**	**5,261**		**1,872**	**5,007**		**1,655**	**4,344**		-21

Source: FlowInfo 15.0. All separations for SRG 72 Obstetrics by ESRG

In 2014/15 there were 1,245 separations for ESRG Vaginal Delivery and Caesarean Section at The Tweed Hospital. Of these 23% (n=293) were for Caesarean Section and 77% (n=952) were for Vaginal delivery. As can be seen in the table below separations for Vaginal Delivery and Caesarean Section declined by 18% from 2011/12 to 2014/15. The decrease in the number of births at The Tweed Hospital is depicted in the chart below.

Chart 3: The Tweed Hospital Births 2011/12 – 2014/15



Source: FlowInfo 15.0 Separations for ESRGs Vaginal Delivery and Caesarean Section

As can be seen in the table below the decrease in the number of births at The Tweed Hospital has resulted from decreased demand from Queensland residents the majority of whom are Gold Coast residents. In 2011/12 Gold Coast residents accounted for 50% of birth at The Tweed Hospital and in 2014/15 this reduced to 39%.

Table 14: The Tweed Hospital Births 2010/11-2014/15 by ESRG

Place of Residence	2011/2012	2012/2013	2013/2014	2014/2015
Northern NSW	734	740	775	748
Queensland Residents	781	779	625	491
Other LHD Residents	8	5	5	6
Total	**1,523**	**1,524**	**1,405**	**1,245**

Source: FlowInfo 15.0. All separations for ESRGs Vaginal Delivery and Caesarean Section

In 2014/15 5% (n=66) of women who gave birth at The Tweed Hospital identified as Aboriginal.

Projected Activity

Women of child bearing age represented 20% (25,345) of the total Tweed and Byron LGA population. This population is projected to increase by 4% between 2011 and 2016. In 2011, women of child bearing age represented 24% (12,597) of the total south east Queensland SLA population. This population is projected to increase by 8% between 2011 and 2021.

The scenario is based on the assumption that 100% of separations for caesarean section, postnatal and antenatal care previously undertaken at Murwillumbah District Hospital have been relocated to The Tweed Hospital. Under this scenario the projected activity for SRG Obstetrics for The Tweed Hospital results in 2,228 separations and 5,798 beddays in 2027.

Projected activity for SRG Obstetrics at The Tweed Hospital is presented in the table below. Table 15 projects the need for 21 inpatient obstetrics beds in 2027, assuming an occupancy rate of 75%. It is important to note that the current 22 bed unit also accommodates patients admitted with gynaecology however this inpatient service will be located in a discreet area of surgical services in the future.

Table 15: Projected Supply of Obstetrics Services, The Tweed Hospital 2011/12 – 2026/27 (Scenario)

		2011			2017			2022			2027		
		Seps	Beddays	Beds	Seps	Beddays	Beds	Seps	Beddays	Beds	Seps	Beddays	Beds
Day Only	Antenatal Admission	164	164	1	154	154	0	160	160	1	166	166	1
	Vaginal Delivery	57	57	0	66	66	0	67	67	0	68	68	0
	Caesarean Delivery	2	2	0	1	1	0	1	1	0	1	1	0
	Postnatal Admission	17	17	0	16	16	0	16	16	0	16	16	0
Day Only Total		**240**	**240**	**1**	**238**	**238**	**1**	**245**	**245**	**1**	**251**	**251**	**1**
Overnight	Antenatal Admission	238	355	1	255	455	1	255	453	1	256	454	1
	Vaginal Delivery	1,096	2,843	9	1,101	2,996	10	1,128	3,040	10	1,142	3,055	10
	Caesarean Delivery	302	1,276	4	371	1,580	5	387	1,616	5	395	1,625	5
	Postnatal Admission	100	199	1	185	433	1	184	422	1	184	412	1
Overnight Total		**1,736**	**4,673**	**17**	**1,912**	**5,464**	**20**	**1,954**	**5,532**	**20**	**1,977**	**5,547**	**20**
Grand Total		**1,976**	**4,913**	**18**	**2,150**	**5,701**	**21**	**2,198**	**5,776**	**21**	**2,228**	**5,798**	**21**

Source: aIM 2012 V 2.2 May 2015 NSW MoH-SRG Obstetrics

The Tweed Hospital is projected to have 1,580 births in 2022 and over 1,600 in 2027. While a proportion of this activity will be planned caesareans that will not require a labour delivery room, it is recommended that eight birthing suites are provided to manage the forecast demand. The assumed throughput per labour delivery room is 300 births per birthing room per annum, however the timing of these births is not predictable and therefore sufficient capacity to manage peaks in demand is required. This number of birthing suites will also provide sufficient capacity to accommodate a change to a Midwifery Group Practice model of care where some women will be able to remain for the duration of their hospital stay in the birthing room and a support person is able to stay with them throughout their stay.

6.8 Tweed Valley Birthing Service

Murwillumbah District Hospital Women's Care Unit incorporates the Tweed Valley Birthing Service and Maternity Ambulatory Care. Murwillumbah District Hospital Maternity Service is role delineation level 2, with a role delineation level 1 Neonatal Service.

The Tweed Valley Birthing Service provides midwifery care for healthy women with a normal risk pregnancy. Women can birth at the Murwillumbah District Hospital from 37 weeks' gestation until 42 weeks' gestation. Care is provided throughout the antenatal, birth and up to 4 weeks of the postnatal period. Midwives work within the Australian College of Midwives National Midwifery Guidelines for Consultation and Referral and the Tweed Valley Birthing Service Description of Service. This model of care was introduced in 2009 in response to GP Obstetrician workforce issues.

The Birthing Service has two birthing suites where women are able to remain for the duration of their hospital stay. A support person is able to stay with them throughout their stay as well. Both birthing suites are approved for water immersion during labour but only one birthing suite is approved for water birth. (Only one of the birthing suites is approved for water immersion during labour and birth). The other birthing suite is in need of renovation to undertake water births due to workplace health and safety issues. There is no nursery and mothers and babies remain together at all times in Murwillumbah District Hospital.

Models of Care

- Midwifery Group Practice Model: The Tweed Valley Birthing Service provides a continuity of care model for normal risk pregnant women who are allocated a known midwife who provides individualised care and follows the women across the interface of community and hospital services, through her antenatal, intra partum and early postnatal journey up to 4 weeks post birth;
- The service has capacity for 240 vaginal births per year with midwives caring for 40 women per FTE;
- Shared Care Model: Women may choose antenatal care by the Midwifery Group Practice Midwife or shared care with their GP.

Current Networking Arrangements and Key Service Partners

Murwillumbah District Hospital Maternity and Neonatal Services are part of a tiered network arrangement where the lower role delineated services within the Tweed Byron Health Service Group refer to The Tweed Hospital. This is a well-articulated process and is arranged facility to facility and based on risk identification.

The tertiary referral location is the Gold Coast University Hospital or Brisbane Hospitals depending on availability, reason for transfer and at times patient preference. The Perinatal Advice Line will assist with arrangements and/or advice regarding place and timing of transfer to a tertiary facility. There is a Neonatal Clinical Emergency Response System (CERS) plan for neonates requiring additional care. Emergency retrieval services are organised via the NSW Newborn Emergency Transport Service (NETS).

The Murwillumbah District Hospital services work in close collaboration with The Tweed Hospital Women's Care Unit and Antenatal Clinics. There are established referral pathways for SAFE START, Social Worker, and Diabetes Educator, MUMS Program and Physiotherapy. Allied Health staff is available for referral service to all women and babies.

Child and Family Health Nurses are in contact with Midwives, and offer care on discharge from the hospital service. They also work collaboratively with Midwifery Group Practice Midwives for women requiring care extending past 4 weeks.

The NNSW LHD Clinical Midwifery Consultant is available to provide staff with ongoing support.

Workforce

The Tweed Valley Birthing Service is staffed by:

- 6.0 FTE (7) – Registered Midwives.

There currently is a review of the FTE as the service is not fully booked.

Current Activity

In 2014/15 there were a total of 292 separations for SRG Obstetrics from Murwillumbah District Hospital accounting for 700 beddays. Of the total separations in 2014/15, 10% were Day Only and 90% Overnight. Between 2011/12 and 2014/15 separations for SRG Obstetrics declined by 28%.

In 2014/15 there were 122 separations for ESRG Vaginal Delivery and Caesarean Section at Murwillumbah District Hospital. Of these 34% (n=42) were for Caesarean Section and 66% (n=80) were for Vaginal Delivery. As can be seen in the table below separations for Vaginal Delivery and Caesarean Section have declined by 33% between 2011/12 and 2014/15. Due to workforce issues the model of care for birthing services changed to a midwifery group practice model in 2009 and the hospital ceased to provide elective caesarean sections in October 2015. It is also important to note that birthing ceased at Murwillumbah District Hospital on 29 May 2015 and reopened on 19 October 2015.

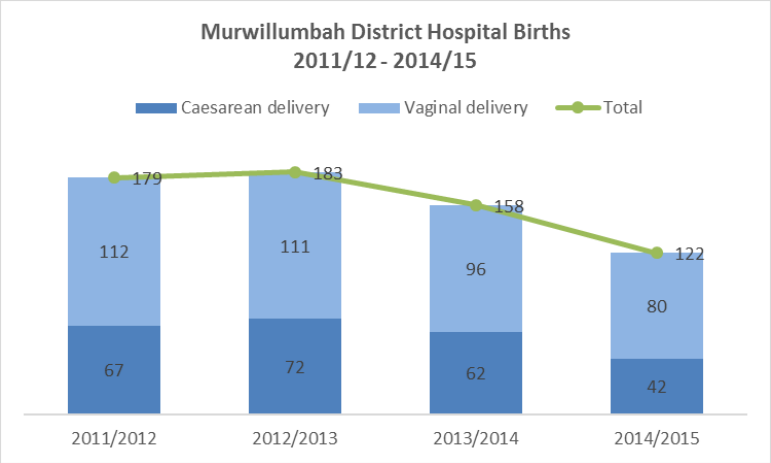
Table 16: Murwillumbah District Hospital Separations for SRG Obstetrics 2011/12 – 2014/15

	2011/12			2012/13			2013/14			2014/15			% Change
	Seps	Beddays	ALoS	Seps	Beddays	ALoS	Seps	Beddays	ALoS	Seps	Beddays	ALoS	in Seps
Antenatal admission	**54**	**68**	**1.3**	**43**	**46**	**1.1**	**60**	**67**	**1.1**	**36**	**40**	**1.1**	-33
Day Only	27	27	1.0	24	24	1.0	41	41	1.0	20	20	1.0	-26
Overnight	27	41	1.5	19	22	1.2	19	26	1.4	16	20	1.3	-41
Caesarean delivery	**67**	**234**	**3.5**	**72**	**257**	**4.3**	**62**	**212**	**3.4**	**42**	**141**	**3.4**	-37
Day Only	1	1	1.0	0	0		0	0		0	0		-100
Overnight	66	233	3.5	72	257	3.6	62	212	3.4	42	141	3.4	-36
Postnatal admission	**171**	**426**	**2.5**	**177**	**453**	**2.6**	**173**	**403**	**2.3**	**134**	**344**	**2.6**	-22
Day Only	6	6	1.0	6	6	1.0	6	6	1.0	5	5	1.0	-17
Overnight	165	420	2.5	171	447	2.6	167	397	2.4	129	339	2.6	-22
Vaginal delivery	**112**	**201**	**1.8**	**111**	**242**	**2.2**	**96**	**184**	**1.9**	**80**	**175**	**2.2**	-29
Day Only	21	21	1.0	9	9	1.0	10	10	1.0	5	5	1.0	-76
Overnight	91	180	2.0	102	233	2.3	86	174	2.0	75	170	2.3	-18
Total	**404**	**929**		**403**	**998**		**391**	**866**		**292**	**700**		-28

Source: FlowInfo 15.0. All separations for SRG 72 Obstetrics by ESRG

The decrease in the number of births at Murwillumbah District Hospital is depicted in the chart below. In 2014/15 six women who gave birth at Murwillumbah District Hospital identified as Aboriginal.

Chart 4: Murwillumbah District Hospital Births 2010/11-2014/15 by ESRG



Source: FlowInfo 15.0. All separations for ESRGs Vaginal Delivery and Caesarean Section and NNSW LHD Casemix Reporting

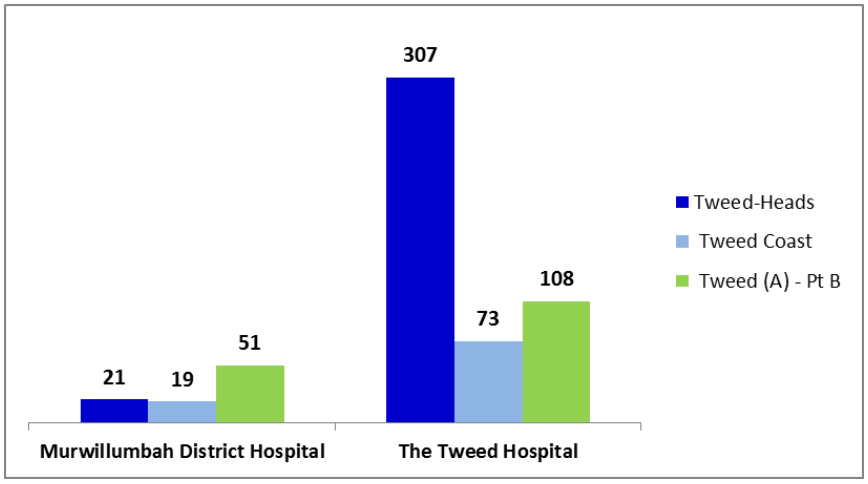
Projected Activity

Total demand for Tweed LGA residents for ESRG 722 Vaginal Delivery and 723 Caesarean Section in 2014/15 was for 790 separations. Of these 22% (n=177) were for Caesarean Section and 78% (n=613) were for Vaginal Delivery.

Of the total demand for ESRG 722 Vaginal Delivery in 2013/14 (n=613) for Tweed LGA residents 15% (n=91) were from Murwillumbah District Hospital and 80% (n=488) were from The Tweed Hospital. The remaining separations for Vaginal Delivery for Tweed LGA residents (n=34) were from Queensland Hospitals (n=18), Mullumbimby (n=13) and a small number from other hospitals in NSW.

The chart below details residents of Tweed SLAs[18] by place of care for Vaginal Delivery at Murwillumbah District and The Tweed Hospitals in 2013/14.

Chart 5: Births at Murwillumbah District and The Tweed Hospitals 2013/14 by SLA of Residence for Tweed LGA



Source: FlowInfo 14.0. All separations for ESRGs Vaginal Delivery and Caesarean Section at The Tweed Hospital and Murwillumbah District Hospital for Tweed LGA residents by SLA

Caesarean sections are no longer performed at Murwillumbah District Hospital and overnight inpatient beds closed on 29 November 2015. The model of care at Murwillumbah District Hospital is expected to continue as a Midwifery Group Practice model. Overnight inpatient beds for antenatal, postnatal and birthing are not available. The targeted services for flow reversal for Murwillumbah District Hospital, as defined under this scenario model, are therefore for all separations for caesarean section. Overnight antenatal and postnatal admissions previously from Murwillumbah District Hospital have been reallocated to The Tweed Hospital.

The projected activity for ESRG 722 Vaginal Births at Murwillumbah District Hospital is therefore around 172 separations in 2026/27. Based on this activity level two birthing suites are more than adequate into the future.

The model of care for Tweed Valley Birthing Service is expected to continue as a Midwifery Group Practice model. Should service demand, increased staffing will need to be reviewed.

6.9 Byron Community Birthing Service

Mullumbimby and District War Memorial Hospital was replaced by Byron Central Hospital in 2016. The new Byron Community Birthing Service is delivered at role delineation level 2, with a role delineation level 1 Neonatal Service.

Byron Community Birthing Service will provide maternity care for healthy women with a normal risk pregnancy. Women will be able to birth at the Byron Central Hospital from 37 weeks' gestation until 42 weeks' gestation. Care will be provided throughout the antenatal period, during birth and up to 6 weeks of the postnatal period. Midwives will continue to work within the Australian College of Midwives National Midwifery Guidelines for Consultation and Referral and the Byron Community Birthing Service Description.

At Byron Central Hospital there are three birthing rooms, where women will be able to remain for the duration of their hospital stay, and a support person is able to stay with them throughout their stay as well.

[18] *Tweed A-Pt B includes Murwillumbah and surrounds*

Antenatal education is provided by the midwives through individual and group sessions. Prenatal Education and Parenting classes are also provided by the Community Health Service.

The Unit also has three antenatal clinic rooms, where women can be seen for their antenatal appointments with the midwife. The Service will also continue to offer Publicly Funded Homebirths.

There is no nursery and mothers and babies remain together at all times in Byron Central Hospital. The principles of Baby Friendly Hospital Initiatives are adopted and followed.

Models of Care

Three models of maternity care exist for women wishing to have their baby at the Byron Central Hospital Birthing Centre:

- Midwifery Group Practice Model: A continuity of care model for normal risk pregnant women who are allocated a known midwife who provides individualised care and follows the woman across the interface of community and hospital services, through her antenatal, intra partum and early postnatal journey up to 6 weeks post birth. Two of the team midwives are present for the birth. An on-call doctor is available at all times;
- Shared Care Model: Women share their antenatal care between a Byron Central Birthing Service Doctor and primary midwife. Both the doctor and midwife are present at the birth;
- Home Birth Model - Publicly Funded: Women who choose to give birth at home, attended by the team midwife. Antenatal visits take place either in the woman's home or at the birth centre. Two midwives attend the birth.

Current Networking Arrangements and Key Service Partners

Byron Community Birthing Service is part of a tiered network arrangement. The escalation plan for Byron Community Birthing Service identifies The Tweed Hospital and/or Lismore Base Hospital as the referral hospital for mothers and babies. Women and their babies may be transferred to Lismore Base Hospital for higher level care, depending on their home address, women's choice and availability of beds at the accepting hospital. This is a well-articulated process and is arranged facility to facility and based on risk identification.

The Director of Paediatrics for the Tweed Byron Health Service Group has established an on call roster of specialist paediatricians to respond to any concerns about neonates. A high definition camera will also be installed above the rescusitaire in one of the birthing rooms at Byron Central Hospital to facilitate specialist paediatrician support through a Telemedicine model.

The tertiary referral location is the Gold Coast University Hospital or Brisbane Hospitals depending on availability, reason for transfer and at times patient preference. The Perinatal Advice Line will assist with arrangements and/or advice regarding place and timing of transfer to a tertiary facility. There is a Neonatal Clinical Emergency Response System (CERS) plan for neonates requiring additional care. Emergency retrieval services are organised via the NSW Newborn Emergency Transport Service (NETS). There is an agreement with NSW Ambulance that women and their babies can be transferred directly from home to a referral hospital if required during a homebirth.

The Murwillumbah District Hospital and The Tweed Hospital Antenatal 'at risk' Doctor Clinics work collaboratively with the Byron Community Birthing Service to provide antenatal care for women falling outside their 'normal risk' criteria. These women will birth at The Tweed Hospital or occasionally a tertiary centre.

There are established referral pathways for SAFE START, Social Work, Diabetes Educator, MUMS Program and Physiotherapy. Allied Health staff are available for referral service to all women and babies.

Child and Family Nurses are in contact with midwives and GPs, and offer care on discharge from the hospital service. They also share care with the Midwifery Group Practice midwives if midwifery care is required for more than 2 weeks postnatally.

The NNSW LHD Clinical Midwifery Consultant is available to provide staff with ongoing support.

Workforce

The current workforce for Byron Community Birthing Service is:

- 5.2 FTE - Midwifery Group Practice Midwives: All substantive positions are Clinical Midwifery Specialist1, and two of the permanent midwives are also accredited Lactation Consultants;
- 3 - VMO (Obstetrics) who are available on-call 24/7 (rotating roster);
- Director of Obstetrics and Gynaecology for the Tweed Byron Health Service Group – located at The Tweed Hospital;
- Director of Paediatrics for the Tweed Byron Health Service Group – located at The Tweed Hospital.

Current Activity

In 2014/15 there were a total of 156 separations for SRG Obstetrics from Mullumbimby and District War Memorial Hospital accounting for 193 beddays. Of the total separations in 2014/15, 41% were reported as Day Only and 59% as Overnight. As can be seen in the table below separations for SRG Obstetrics declined by 48% from 2011/12 to 2014/15 and beddays by 36% during the same period.

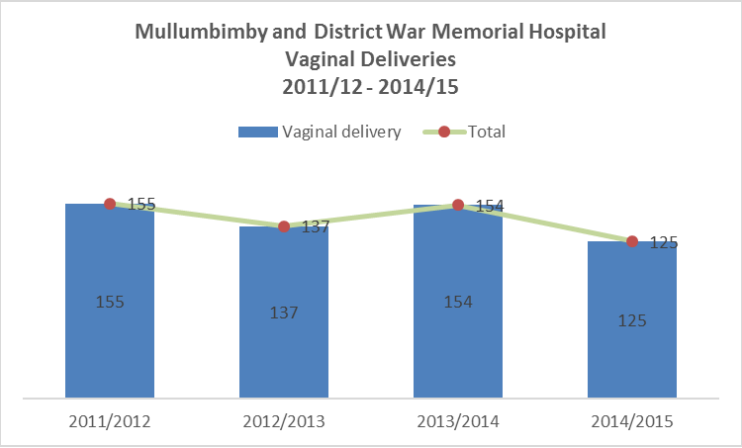
Table 17: Mullumbimby and District War Memorial Hospital Separations for SRG Obstetrics 2011/12 -2014/15

	2011/12			2012/13			2013/14			2014/15			% Change
	Seps	Beddays	ALoS	Seps	Beddays	ALoS	Seps	Beddays	ALoS	Seps	Beddays	ALoS	in Seps
Antenatal admission	**17**	**18**	**1.1**	**31**	**32**	**1.0**	**17**	**17**	**1.0**	**23**	**23**	**1.0**	35
Day Only	8	8	1.0	18	18	1.0	9	9	1.0	18	18	1.0	125
Overnight	9	10	1.1	13	14	1.1	8	8	1.0	5	5	1.0	-44
Postnatal admission	**22**	**39**	**1.8**	**11**	**23**	**2.1**	**8**	**15**	**1.9**	**8**	**15**	**1.9**	-64
Day Only	1	1	1.0	0	0		1	1	1.0	0	0		
Overnight	21	38	1.8	11	23	2.1	7	14	2.0	8	15	1.9	-62
Vaginal delivery	**155**	**245**	**1.6**	**137**	**172**	**1.3**	**154**	**207**	**1.3**	**125**	**155**	**1.2**	-19
Day Only	40	40	1.0	60	60	1.0	67	67	1.0	46	46	1.0	15
Overnight	115	205	1.8	77	112	1.5	87	140	1.6	79	109	1.4	-31
Total	**194**	**302**		**179**	**227**		**179**	**239**		**156**	**193**		**-48**

Source: FlowInfo 15.0. All separations for SRG 72 Obstetrics by ESRG

There were 125 separations for vaginal delivery at Mullumbimby and District War Memorial Hospital in 2014/15. The Midwifery Group Practice model is capped at 144 in line with staffing of 5.1 FTE Midwives. The number of births at Mullumbimby and District War Memorial Hospital between 2011/12 and 2014/15 is depicted in the chart below. The service reports that approximately 25% of births are homebirths.

Chart 6: Mullumbimby and District War Memorial Hospital Vaginal Deliveries 2011/12 -2014/15

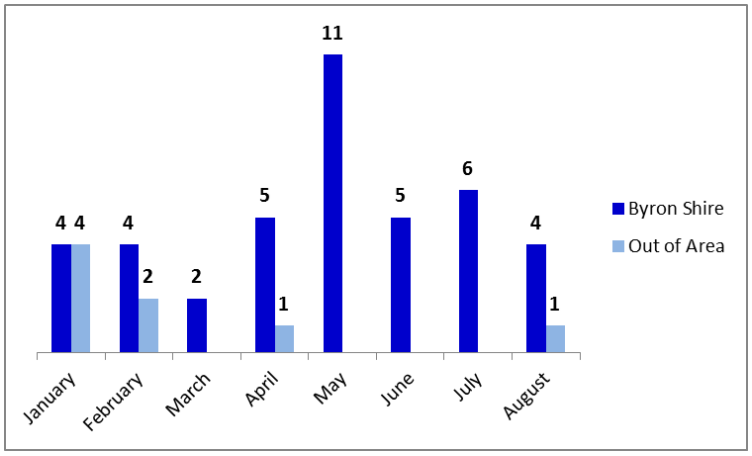


Source: FlowInfo 15.0. All separations for ESRGs Vaginal Delivery

Of the 125 births in 2014/15 one woman identified as Aboriginal.

The Mullumbimby Community Birthing Service currently has a waiting list for admission to the Birthing Service made up of both Byron Shire residents and women located outside the Shire. The number of women waiting to access the birthing service in 2016 is detailed in the chart below.

Chart 7: Mullumbimby and District War Memorial Hospital Waiting List 2016 by Place of Residence



Source: Mullumbimby and District War Memorial Hospital Waiting List Information 2016

Projected Activity

Total demand for ESRG 722 Vaginal Delivery and 723 Caesarean Section for Byron LGA residents in 2014/15 was for 265 separations. Of these 58 separations (22%) were for caesarean section and 242 (78%) were for vaginal delivery.

Of the 265 separations Byron LGA 34% (n=86) of women birthed at Mullumbimby and District War Memorial Hospital, 12% (n=33) birthed at Lismore Base Hospital and 48% (n=128) were from The Tweed Hospital (n=96). The remaining 6% of births were in private hospitals, Sydney and Queensland hospitals.

Byron Community Birthing Service will continue to provide maternity care for healthy women with a normal risk pregnancy. There were 125 vaginal births at the Mullumbimby Community Birthing Service in 2014/15 (both home and centre based) however both demand and waiting list information indicate a level of unmet demand for services locally. Due to the construction of the new motorway demand is expected to grow from residents of Ballina Shire.

Completion of the Tintenbar to Ewingsdale section of the Pacific Motorway and opening of the new Byron Central Hospital in 2016 will provide easier access to a growing population of residents residing in Ballina Shire. Lennox Head (Ballina Shire) had a population of 7,301 including 1,361 women aged 15-44 years[19] in 2011. The distance from Lennox Head to Ewingsdale is 29.4kms (EDT=24min). Lennox Head is 37.5kms (EDT=37min) from Lismore Base Hospital which is the other nearest birthing centre. Another rapidly growing area of Ballina Shire is the Newrybar Cumbalum corridor. This area had a population of 2,536 in 2011 including 418 women aged 15-44 years. The distance from Cumbalum to Ewingsdale is 26.5kms (EDT=16.4 min). These drive times are expected to reduce with the opening of the motorway.

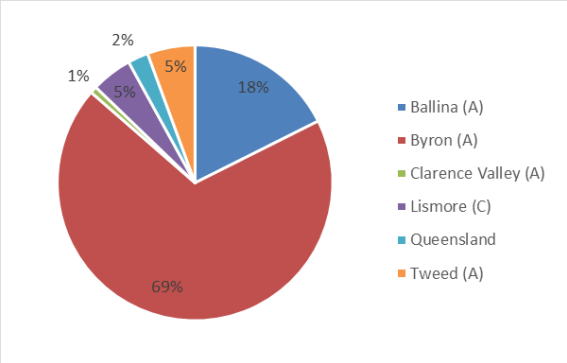
Lismore Base Hospital will continue to provide level 5 Maternity Services and be the referral hospital for residents of Lennox Head and the Cumbalum corridor however the new Byron Central Hospital at

[19] *Ballina Shire Council Community Profile*

Ewingsdale will attract a number of women from the Lennox Head Cumbalum areas for the Midwifery Group Practice/Shared Care model.

Of the 125 separations for birthing at the Mullumbimby Community Birthing Service in 2014/15, 69% (n=86) were for residents of Byron LGA, 18% (n=22) were for residents of Ballina LGA and 6% (n=7) were for residents of Tweed LGA and the remaining 10 separations for residents of Lismore, Queensland and Glen Innes.

Chart 8: Mullumbimby and District War Memorial Hospital Births by By Place of Residence



Source: FlowInfo 15.0. All separations for ESRGs Vaginal Delivery

Based on the assumption that due to the close proximity of the Byron Central Hospital to Lennox Head and the Cumbalum corridor more women will choose to birth at the new Byron Central Hospital. Additional capacity is required to meet the needs of Byron Shire residents and a portion of residents from Ballina Shire for low risk birthing services. The target services for flow reversal for the new Byron Central Hospital, as defined under this scenario model are:

- 100% of Byron LGA residents Day Only Vaginal Deliveries from Lismore Base Hospital;
- 50% of Ballina LGA residents Day Only Vaginal Deliveries from Lismore Base Hospital;
- 20% of Ballina LGA residents Overnight Vaginal Deliveries from Lismore Base Hospital.

Under this scenario the projected activity for birthing at Byron Central Hospital will increase by 54% between 2011 and 2026 resulting in a total of 215 separations and 414 beddays. Based on these activity levels and allowing for fluctuations the number of birthing suites required would be two. The current capacity of three Birthing Units is therefore considered to be more than adequate to meet increasing demand resulting from population growth and the flow reversal model.

The model of care for Byron Community Birthing Service is expected to continue as a Midwifery Group Practice/Shared Care model. A portion of the births will also continue to be home births. Increments of 1.0 FTE for each 36 additional births including both hospital and home births indicates that a total of 180 births can be safely managed under this model with an additional 1.0 FTE Midwife.

6.10 BREASTFEEDING

NSW Health promotes breastfeeding as there is compelling evidence that breastfeeding is protective against a wide range of short and longer term health problems in infants and mothers.

PD 2011_042 Breastfeeding in NSW, Promotion, Protection and Support provides a framework for a continued commitment to state and national initiatives to support breastfeeding. The Policy recommends a focus on further implementation of the Baby Friendly Health Initiative.

The Baby Friendly Health Initiative provides a framework to protect, promote and support breastfeeding. The framework for Baby Friendly Hospitals supports health services to operate within the *Ten Steps to Successful Breastfeeding* and in community facilities this is called the 7 *Point Plan*. These standards ensure all mothers and babies receive appropriate support and contemporary information in both the antenatal and postnatal period regarding infant feeding.

The Ten Steps to Successful Breastfeeding[20] are:
Every facility providing maternity services and care for newborn infants should:

- Have a written breastfeeding policy that is routinely communicated to all health care staff;
- Train all health care staff in skills necessary to implement this policy;
- Inform all pregnant women about the benefits and management of breastfeeding;
- Help mothers initiate breastfeeding within half an hour of birth;
- Show mothers how to breastfeed, and how to maintain lactation even if they should be separated from their infants;
- Give newborn infants no food or drink other than breast milk, unless medically indicated;
- Practise rooming-in, that is, allow mothers and infants to remain together - 24 hours a day;
- Encourage breastfeeding on demand;
- Give no artificial teats or pacifiers (also called dummies or soothers) to breastfeeding infants;
- Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from the hospital or clinic.

In a Baby Friendly facility, breastfeeding is encouraged, supported and promoted. Breastfed babies are not given breastmilk substitutes (infant formula), dummies or teats unless medically indicated or it is the parents' informed choice. Regardless of feeding choices and circumstances, every woman is supported to care for her baby in the best and safest way possible.

6.11 State-Wide Infant Screening for Hearing

The NSW Newborn Hearing Screening Program is a State-wide Infant Screening for Hearing (SWISH) Program which commenced in December 2002. Since that time, over 95% of babies born in NNSW LHD have been screened. Through this program babies are offered a hearing screen. The screening is done as soon as practical after the birth and should be completed by one month corrected gestational age.

[20] *Protecting, Promoting and Supporting Breastfeeding: The Special Role of Maternity Services,* a joint WHO/UNICEF statement published by the World Health Organization.

Screening is conducted at

- The Tweed Hospital by a specially trained Enrolled Nurse and occasionally by some of the midwives if screening does not occur before discharge follow up screening is attended as an outpatient on Mondays, Wednesdays or Fridays;
- Murwillumbah District Hospital screening is conducted by Midwifery staff who perform screening 1 day per week as an outpatient;
- Byron Central Hospital screening is conducted by a Nurse Audiometrist as soon as possible after birth. Outpatient clinics are provided for those that cannot be tested immediately following delivery.

Approximately one-two babies per thousand are expected to be diagnosed with a bilateral moderate or greater hearing loss. The target for screening of newborns under the SWISH program is 97% of newborns screened each year. In 2014 and 2015 the target was met at Murwillumbah (98% in 2015) and The Tweed Hospital (98% in 2015) however results at Mullumbimby and District War Memorial Hospital were 85% of newborns screened in 2014 and 85% in 2015.

6.12 Special Care Nursery

The neonatal period is considered to be the first 28 days of life. This covers management of babies ≥32 weeks' gestation with minimal to moderate complications and can provide short-term complex care in consultation with level 5/6 Neonatal Centres. The Special Care Nursery is a level 4 Neonatal Unit providing specialist care to sick term and pre-term neonates. The Nursery is supported by staff Specialists, Paediatricians and nursing staff. Allied Health provides social work, speech therapy, physiotherapy and occupational therapy support to families and babies in the Special Care Nursery. The Special Care Nursery is capable of delivering care to convalescing medical and surgical neonates.

The Special Care Nursery is comprised of six funded special care nursery cots. There is capacity within the Unit to expand to 10 cots. Specific facilities include open care cot for babies requiring ventilation /continuous positive airway pressure, incubators, cardiorespiratory monitoring, IV fluid therapy, tube feeding and phototherapy.

NSW Health PD2008_027 Maternity - Clinical Care and Resuscitation of the Newborn Infant is relevant to the Special Care Nursery. The Policy Directive has directed that there will be a person trained in advanced neonatal resuscitation on-call for low risk births and in attendance for all high risk births. This directive acknowledges that while the need for resuscitation of the newborn infant can often be predicted, the need may also arise suddenly and in any birth setting.

The Tweed Hospital is a consultation and referral centre for the lower role delineated maternity and neonatal facilities within the Tweed Byron Health Service Group. This involves providing support for clinicians at Murwillumbah District Hospital and Mullumbimby and District War Memorial Hospital which provide level 1 Neonatal Services. There are no other hospitals offering specialist neonatal services in the Tweed Byron Health Service Group.

Transfer to a higher level service may occur if neonatal intensive care services (NICU) are required for babies less than 32 weeks' gestation or who are critically ill. Referral in this instance is directly to a tertiary service with Neonatal Intensive Care Unit capacity. The Tweed Hospital Special Care Nursery has established referral links with a level 5 Neonatal Intensive Care Unit through a cross-border referral arrangement with Gold Coast University Hospital which now takes newborns from viability, Mater Mothers and Royal Women's Hospitals in Brisbane via Retrieval Services Queensland (NEOresQ) for critical babies of any gestation.

The Tweed Hospital Special Care Nursery provides ongoing care for return transfers of pre-term and convalescing infants no longer requiring higher level services.

Models of Care

The models of care for Neonatal Services at The Tweed Hospital include:

- Family Centred Care: This is a model of care that encourages a collaborative role between parents and the neonatal nurse. It aims to promote a partnership between parents and nurses in order to reduce parental anxiety;
- Shared Care: This is the model of care used when a previously premature/sick infant is ready to leave the Special Care Nursery and go to the postnatal ward to be cared for by the mother and postnatal staff. Special Care Nursery staff remain involved in any changes to the care-plan of these babies;
- Developmental Care and Supportive Positioning: Developmental care is an approach to individualise care of infants to maximise neurological development and reduce long term cognitive and behavioural problems. The goals of developmental care are to:
  - Reduce Stress;
  - Conserve energy and enhance recovery;
  - Promote growth and wellbeing;
  - Support emerging behaviours at each stage of neurodevelopmental maturation;
- Nurse: Infant ratio in the Special Care Nursery:
  - 1:1 ratio for high acuity infants e.g. babies receiving continuous positive airway pressure (CPAP)/ventilation;
  - 1:4 ratio for all other infants in the Special Care Nursery;
- Parenting support for identified families with vulnerabilities e.g. SAFE START, young women and culturally and linguistically diverse (CALD) women;
- Lactation/breastfeeding support is currently provided by the Parenthood Educator with International Board Certified Lactation Consultant qualification;
- Mums Using Methadone Program (MUMS): Mothers on the MUMS Program are seen by the Case Manager throughout pregnancy and postnatally to assist with any problems and to support parents of neonates experiencing Neonatal Abstinence Syndrome. Referrals are made to the MUMS Case Manager for any mothers not on the Program that are using illicit substances;
- Social Worker: Offers support and assistance for parents of sick/premature infants and liaises with case workers at the Department of Human Services regarding “child at risk” issues;
- Physiotherapist: A physiotherapist who is experienced in the physiotherapy needs of premature infants is involved in the care of any infant born before 34 weeks’ gestation. Once a premature infant is discharged home, a referral to the community physiotherapist is completed for follow-up;
- Child and Family Health Nurses: Referral is completed by Special Care Nursery staff for infants born prematurely or who have had a significant health issue;
- Speech Pathology: Provide input and support to infants with feeding difficulties and also follow up babies with special needs on discharge;
- Physiotherapy and Occupational Therapy are also involved in staff and parent education regarding developmental care. Occupational Therapy and Physiotherapy will also follow up babies in the community on discharge when necessary;
- Department of Human Services: Department of Human Services (NSW) and Child Safety (Queensland) Case Workers liaise with The Tweed Hospital Social Worker and Special Care Nursery staff when child at risk issues arise and/or when issues have become evident during a woman’s pregnancy;
- Introduced Bubble Continuous Positive Air Pressure 6 years ago resulting in increased capacity to care for infants with respiratory distress in the Special Care Nursery.

Current Networking Arrangements

The Tweed Hospital Maternity and Neonatal Services are part of a tiered network arrangement where the lower role delineated services within the Tweed Byron Health Service Group refer to The Tweed Hospital. This is a well-articulated process and is arranged facility to facility and based on risk identification.

The Tweed Hospital Special Care Nursery has established referral links with a level 5 Neonatal Intensive Care Unit through a cross-border referral arrangement with Gold Coast University Hospital which now takes newborns from viability, Mater Mothers and Royal Women's Hospitals in Brisbane via Retrieval Services Queensland (NEOresQ) for critical babies of any gestation.

Child and Family Nurses are in contact with Midwives, and offer care on discharge from the hospital service. Allied Health staff are available for referral service to all babies.

Workforce

- 1.0 FTE Nurse Unit Manager;
- 2.8 FTE Registered Nurses;
- 7.02 FTE Registered Midwives.

Current Activity

In 2014/15 there were a total of 300 separations from the Special Care Nursery at The Tweed Hospital accounting for 2,054 beddays. As seen in the table below there has been a 9% drop in separations and 6% in beddays between 2011/12 and 2014/15. Extrapolating YTD 2015/16 to June 2015/16 there is expected to be approximately 380 separations from the Special Care Nursery accounting for 2,432 beddays indicating growth in separations of around 26% and in beddays of 18.4%. This may reflect increased demand being experienced in the Special Care Nursery resulting from the closure of neonatal services at Murwillumbah District Hospital in 2015.

Table 18: The Tweed Hospital Special Care Nursery Separations and Beddays 2011/12-2014/15

TTH Special Care Nursery	2011/12	2012/13	2013/14	2014/15	% Change 2011/12-2014/15
Separations	331	341	329	300	-9
Beddays	2,182	2,063	2,236	2,054	-6
Beds @ 75% occupancy	8	8	8	8	

Source: The Tweed Hospital Activity Reporting 2011-2015 Special Care Nursery

Projected Activity

The projected increase of 8.9% in the population of women of child bearing age who reside in the Tweed Byron Health Service Group will increase demand for the Special Care Nursery. The methodology used to project activity in the Special Care Nursery at The Tweed Hospital uses 2015/16 YTD base year extrapolated to June 2016 and applies projected population growth in the female child bearing age group to 2026. Using this methodology, it is projected that there will be an increase in the volume of separations to 395 and 2,580 beddays in 2026/27. This is a conservative result as the actual impact of the closure of neonatal services at Murwillumbah District Hospital is not yet fully realised.

Table 19: The Tweed Hospital Projected Separations and Beddays for Special Care Nursery 2016-2026

Year	2016	2022	%Change 2016-2022	2026	% Change 2022-2026
Separations	380	388	2	399	3
Beddays	2,432	2,529	3	2,605	3

Source: The Tweed Hospital Activity Reporting 2011-2015 Special Care Nursery applying population growth projections NSW Department of Environment and Planning New South Wales State and Local Government Area Population Projections: 2014

Current activity indicates a need for nine special care nursery cots however the need fluctuates and there are times when 13 cots have been required. Projected activity indicates a need for 10 cots in 2026. Capacity for 15 cots should be included in design to allow for fluctuations in demand.

6.13 POSTNATAL CARE

The postnatal period marks a significant point of transition in a woman's life. The period of postnatal care extends from the hospital stay to the community and home and is provided by multiple caregivers.

The objectives of care of mother and baby in the postnatal period include:

- Provision of rest and recovery following birth;
- Supporting maternal attachment and assisting in the development of maternal self-esteem;
- Supporting the family unit and identification and management of risks in this setting;
- Initiation, education and support of continuation of breastfeeding where possible;
- Prevention, identification and effective management of postnatal depression;
- Identification and management of maternal and infant morbidity; and addressing family planning and contraceptive needs.

Evidence demonstrates the improved clinical outcomes for women and their newborns when their maternity care is provided by a known midwife in collaboration with other maternity care providers such as Obstetricians, Neonatologists, GPs and Allied Health. Models of postnatal care emphasise a number of principles, including continuity of caregiver in both the pre- and post-birth periods, integration of hospital and community services and collaboration between health-care workers.

At The Tweed Hospital women often have a short stay with an expectation of follow up with their GP. They may be cared for by a number of midwives.

The Midwifery Group Practice currently provided by Tweed Valley and Byron Community Birthing Services provides a woman with a primary midwife and a backup midwife for the antenatal, intrapartum and postnatal periods. Byron Community Birthing Service also offers a shared care model of care working with General Practice. The Byron Community Birthing Service provides postnatal care up to 6 weeks of the postnatal period and Tweed Valley Birthing Service up to 4 weeks.

There is a gap in provision of community based postnatal care for women being discharged from The Tweed Hospital and from public and private facilities in Queensland to Byron Shire.

6.13.1 EARLY DISCHARGE PROGRAM

The Early Obstetric Discharge Programs based at Tweed and Murwillumbah provide:

- Contact with the family after discharge offering a postnatal home visit for families who meet the discharge criteria to be eligible for this service;
- Short term follow up by phone or home visits depending on the needs of the family until day 5 for vaginal delivery and day 7 for caesarean section;
- Mother and baby checks including new born screening, sleep and settling and lactation support and advice;
- Families in NSW on the Early Discharge Program are also offered Universal Home Visiting.

An Early Discharge Midwifery Service is provided by Tweed Heads and Murwillumbah Community Health to women being discharged from The Tweed Hospital <72 hours following a vaginal delivery and <96 hours following a lower uterine segment caesarean section. The service operates Monday to Friday from 8.30am to 5.00pm and Saturday 9.00am to 2.00pm. The catchment for the Murwillumbah Early Obstetric Program is residents of Tweed LGA (Postcodes 2484, 2487, 2488, 2489, 2490) and for the Tweed Service it includes residents of Tweed LGA (Postcodes 2485, 2486) and Queensland to Currumbin Creek.

Tweed Women's Care provides the same Community Early Obstetric Discharge Program to women being discharged from The Tweed Hospital <72 hours following a vaginal delivery and <96 hours following a lower

uterine segment caesarean section who reside in the area from Currumbin Creek to Tallebudgera Creek. Service hours are Monday to Friday 7.30am to 4.00pm.

Gold Coast Hospital and Health Service (GCHHS) offers postnatal home visits and follow up for all Medicare eligible women living within the entire GCHHS geographical area including those who live from Currumbin Creek to Coolangatta. The service runs 7 days a week and women are also offered assistance through community lactation clinics if problems cannot be resolved by the home visiting midwife. Women who live outside GCHHS geographical area are referred to their local child health service. GCHHS does not provide services for Gold Coast women who birth at The Tweed Hospital.

Workforce Early Discharge

- 1.0 FTE Midwife - The Tweed Hospital Women's Care;
- 1.38 FTE Midwives - Tweed Community Health;
- 1.0 FTE Midwife - Murwillumbah Community Health.

Current Networking Arrangements and Key Service Partners

The current networking arrangements in place for postnatal care include:

- Internal links across the full range of Community and Allied Health Services, SAFESTART, Mental Health, MUMs and Drug and Alcohol Services;
- External links with private organisations such as Healthy Minds and GPs, clients are referred directly to these services and have follow up with a GP within 2 weeks;
- Private/independent midwives working with GPs who also provide a Medicare funded early discharge home visiting service. Liaison and communication between the services in regard to early client follow up and newborn screening on discharge from The Tweed Hospital to ensure these families are being followed up by a service;
- Queensland Child Health Services – transition and referral to Queensland Child Health after completion of early discharge service;
- At The Tweed Hospital there are weekly meetings with the Paediatrician, Paediatric Therapy Team, Special Care Nursery Team and Social Worker to plan the discharge and follow up services for infants;
- The Early Discharge Program Nurse regularly refers to GPs for referrals to a Paediatrician and works closely with Child and Family Nurses, Parent Educator, MUMs program, Social Work, Mental Health and Allied Health Services.

6.14 Allied Health Services

Allied Health staff provides assessment treatment and education services to women and newborns living in the Tweed and Byron Shires through a range of services including prenatal education, postnatal care and special care nursery in the hospital and community setting. This includes inpatients, outpatients and community clients. Many Allied Health staff have dual roles in providing both generalist and specialist services.

Allied Health Services are located in The Tweed, Murwillumbah District and Byron Central Hospitals and Community Health Services. The catchment for Tweed includes Tweed Heads 2485 and Tweed Heads South 2486. The catchment for Murwillumbah includes Murwillumbah 2484, Chinderah, Kingscliff 2487, Bogangar 2488, Pottsville 2489 and Tumbulgum 2490. The boundary for the service is the Queensland/NSW Border. The catchment for Byron Shire Services is residents of Byron LGA.

Current Networking Arrangements and Key Service Partners for Allied Health

The current networking arrangements and key service partners for Allied Health Services include multidisciplinary team members including, Community Nurses, Child and Family Nurses and Early Discharge Midwives, SAFE START, Parenting Educators, Women's Care Unit and Outpatient Departments, Byron and

Tweed Valley Birthing Services, Paediatricians, Drug and Alcohol Services, Diabetes Services, Mental Health Services and Oral Health Services. For Dietetics this also includes Food Services.

External service partners include GPs, Family and Community Services, private hospitals, Gold Coast University Hospital, Queensland Child Development Service, Lady Cilento Children's Hospital specialist clinic services, Shaping Outcomes, Northcott Disability Services, Cerebral Palsy Alliance, Autism Spectrum Australia (ASPECT) and non-government organisations i.e. The Family Centre, Healthy Minds, Supported Play Groups, Brighter Futures and Education Centres e.g. Preschools and Day Care Centres, Out of Home Care foster agencies and School Education.

6.14.1 PAEDIATRIC SPEECH PATHOLOGY SERVICES

The model of care for the Paediatric Speech Pathology Service provides universal assessment, coordinated care, child care and limited home visiting by Community Child and Family Speech Pathology staff. Services are provided via individual appointments, multidisciplinary team appointments, group sessions and parent education. The target group for this service is children aged 0-5 years.

Paediatric Speech Pathology Services at The Tweed Hospital include:

- Response to referrals from the Special Care Nursery, Maternity Ward and Paediatric Ward;
- Weekly multidisciplinary team meeting with the Special Care Nursery to plan and evaluate the care of inpatients of the Unit;
- Support and facilitation of a developmental care approach.

Tweed Byron Health Service Group Outpatient Services include:

- Referrals for feeding assessment and support are prioritised;
- Referrals for babies 0-6 weeks of age are received as part of this service and are booked for an individual appointment;
- Rarely receive referrals from Murwillumbah for babies < 6 weeks of age. Most are already booked in with Tweed services;
- Most referrals for Byron Shire are for babies between 10 days and 4 weeks of age.

Other services provided throughout the Health Service Group include:

- Parent Education Programs (e.g. Read and Grow);
- Participate in KidScreen Multidisciplinary Screening Clinics;
- Playgroup between Shaping Outcomes and Tweed Child and Family Allied Health staff to support at risk and vulnerable families not yet tied into a local playgroup;
- Child and Family Allied Health Team work in partnership with families to support their knowledge and role as parents.

Service operating hours across the Health Service Group are Monday – Friday 8.00am - 4:30pm.

Workforce

The current workforce for Paediatric Speech Pathology is:

Tweed Community Health:

- 1.0 FTE Speech Pathologist Level 4;
- 1.0 FTE Speech Pathologist Level 3.

Murwillumbah Community Health Service:

- 1.0 FTE Speech Pathologist;
- 0.4 FTE Level 4 Clinical Educator for Community Health in Schools Project (externally funded) operation 36-40 weeks per year.

Byron Community Health Service:

- 1.0 FTE Level 4 Clinical Senior;
- 1.0 FTE Level 3.

6.14.2 Paediatric Occupational Therapy

Depending on clinical need, clients are accepted for Occupational Therapy services individually or through the multidisciplinary screening clinic "KidScreen". The aim of intervention is to facilitate optimal performance during all functional activities. The target group for Occupational Therapy services is children aged 0-18 years.

Paediatric Occupational Therapy services in the Special Care Nursery include:

- Facilitation of developmental care in the nursery;
- Premature follow up and parent education;
- Promoting family participation in care within medical limitations;
- Parent education is one on one or a small group on the Special Care Nursery re: attachment/ regulation/developmental expectations/journey in hospital and planning for discharge;
- Education of staff regarding developmental care;
- Normalising process.

Tweed Byron Health Service Group Outpatient services include:

- Premature follow up at 4 months, 8 months and 12 months;
- New parents group – education session at Child Health Nurse Group;
- Service to children with the range of conditions. Some examples include:
    - Fine motor skill delays/injuries;
    - Pervasive Developmental Disorder Not Otherwise Specified (PDD-NOS);
    - Sensory Processing Disorder (SPD);
    - Developmental Coordination Disorder (DCD);
    - Developmental Delay;
    - Joint Hypermobility Syndrome (JHS);
    - Low muscle tone;
    - Gross motor skill delays;
    - Coordination difficulties;
    - Toileting delays;
    - Post trauma.

Workforce

The current workforce for Paediatric Occupational Therapy is:

Tweed Community Health (also provides services to Murwillumbah):

- 1.0 FTE Occupational Therapist - Clinical Senior;
- Rotational staff member.

Byron Community Health:

- 0.7 FTE Paediatric Occupational Therapist.

6.14.3 Physiotherapy Services

Professional physiotherapy services are provided to people of all ages in the Tweed Byron Health Service Group. Physiotherapy assessment treatment and education services are provided to inpatients, outpatients and community clients.

Where possible the Paediatric Physiotherapy Service follows neurodevelopmental care principals within the Special Care Nursery setting. The care is based on family centred therapy, parents as therapists.

The Tweed Hospital Special Care Nursery services include:

- General developmental education (plagiocephaly precautions) to all families in the Special Care Nursery;
- Follow up and assessment of all babies that meet the strict criteria within the Special Care Nursery;
- Outpatient services as part of the multidisciplinary (Occupational Therapy, Speech Pathology and Physiotherapy) KidScreen Clinics at Pottsville, Murwillumbah and Tweed Heads at age adjusted 4, 8 and 12 months or until school age if needed. Physiotherapy will see some babies at 6 weeks if an earlier review is warranted.

Criteria for referral:

- Babies born <34 weeks' gestation;
- Multiple births <34 weeks;
- Babies with low birth weight for gestational age – 1,500g (IUGR <10th centile);
- Babies with clinical history of hypoxic ischemic encephalopathy;
- Babies that are presenting with a delay across more than one area of development;
- Babies with neurological concerns/cardiac conditions;
- Babies who are discharged on home oxygen;
- Babies deemed "at risk" are followed up via the At Risk Clinic i.e. MUMS or known drug/alcohol overuse, known domestic violence and the corresponding KidScreen.

Children with a known disability do not meet the service follow up criteria and have to be followed up by external services e.g. Northcott, Shaping Outcomes and Cerebral Palsy Alliance.

Services at The Tweed Hospital Women's Care Unit include:

- Consultation prior to discharge concerning education, demonstration and the ability to get a patient started in what they need to do next. Patients are then discharged home, with handouts and contact details of Women's Care Outpatient Physiotherapy;
- Women in the immediate postnatal period when referred by Doctors via eMR;
- Automatic referral for third and fourth degree tears, incontinence, rectus diastasis, low back pain and mobility issues;
- It is important to note that due to caseload demands Women's Care patients are prioritised within a larger caseload.

Workforce

The physiotherapist responsible for Women's Care also covers Orthopaedics, Tweed Valley Clinic, Fracture Clinic, Pre-admission Clinic and the Day Surgery Unit.

- 1.4 FTE Paediatric Physiotherapists Tweed and Murwillumbah (currently 0.4 FTE vacant);
- 0.3 FTE Paediatric Physiotherapist Byron Shire;
- The service to Women's Care is a call out service, which is part of a larger rotation.

Future Planning Priorities

- Planning to enhance the service to meet current and future demand and to enhance the role of Physiotherapy within antenatal and postnatal care and education.

6.14.4 KIDSCREEN

The KidScreen program offers multidisciplinary developmental screening for children from birth to school entry. The Multidisciplinary Team is made up of Speech Pathologists, Occupational Therapists and Physiotherapists. The program is made up of regular screening clinics which are conducted across the Health Service Group. It is primarily for children with an identified concern who need assessment by two or

more disciplines. After initial screening, follow up appointments are arranged for Occupational Therapy, Physiotherapy and/or Speech Therapy.

6.14.5 Nutrition and Dietetics

Dietetics and Nutrition Services are provided to people of all ages who reside in the Tweed LGA. Dietetic consultations are provided to inpatients and outpatients of The Tweed Hospital and community clients. Consultation is also provided to group education programs including Cardiac, Respiratory, Falls, Type 2 Diabetes Mellitus, new mothers groups, fussy feeders and many others. Regular in-services education for staff on the wards and a yearly Nutrition Study Day on a variety of topics relating to the management of acute and community adult and paediatric nutrition issues is also provided. There is currently minimal input into the Women's Care Unit and Special Care Nursery.

The model of care is based on:

- Dietician Association of Australia standards;
- NSW Health Model of Care for Diabetes Mellitus;
- Agency for Clinical Innovation (ACI) Nutrition Network - Nutrition standards for adult inpatients in NSW hospitals;
- Nutrition standards for paediatric inpatients in NSW hospitals;
- Therapeutic diet specifications for inpatients in NSW hospitals- Nutrition in Hospitals Committee;
- Nutrition Care Process (American Dietetic Association) – International Standards for Nutrition Care Terminology.

Workforce

The Tweed Hospital and Community Health:

- 1.8 FTE Dietician adult acute wards;
- 0.72 FTE Dietician for adult outpatients;
- 0.4 FTE Dietician paediatric outpatients and inpatients.

Tweed Byron Health Service Group:

- FTE Dietician - Diabetes adult and paediatrics;
- 0.63 FTE Dietician-Transitional Aged Care Service.

Murwillumbah District Hospital and Community Health:

- 0.5 FTE Dietician - adult acute wards and rehabilitation;
- FTE Dietician - Pottsville and Kingscliff Community Health Centres.

Byron Central Hospital and Community Health:

- 0.4 FTE Dietician-adult acute wards, outpatients and paediatrics.

6.15 Social Work Services

Social Work Services are provided to people of all ages who reside in the Tweed Byron Health Service Group.

Tweed Byron Health Service Group Social Workers have defined entry and prioritisation criteria. High priority areas include responding to a death, (including miscarriage), care of the dying, child protection, family violence, new diagnosis, carer stress and trauma:

- Non-acute mental health including antenatal and postnatal depression, anxiety and depression;
- Termination of Pregnancies and Adoptions;
- Early identification of substance misuse dependency – referral Drug and Alcohol Services including to MUMS;
- Biopsychosocial assessment - collateral history gathering including from the Child Wellbeing Unit;

- Collaboration in joint investigation and response matters involving alleged sexual assault or serious child abuse or neglect leading to criminal proceedings (Sexual Assault Service);
- Responding to High Risk Birth Alerts, prenatal reporting, escalation of child protection concerns and assumption of care by Community Services.

Social Work Services receive referrals from the Antenatal Clinics either at booking in or throughout the antenatal period. Some unplanned referral occurs where women have not received antenatal care within the Health Service Group including those women who reside interstate in Queensland. Social Workers in NSW do not provide follow up counselling for Queensland residents, but would refer to appropriate services for women in Queensland.

Social Workers utilise a triage system at Murwillumbah District Hospital for SAFE START referrals. Women attending the Antenatal Clinic at Murwillumbah predominantly plan to deliver at The Tweed Hospital. Internal communication systems and procedures have been put in place for social workers to have easy access to relevant information, if required.

Women may choose to be referred to the Social Work Service or Access to ATAPS which is provided through Healthy Minds on the NSW North Coast. Often a more holistic approach is required with intervention by a Social Worker rather than individual counselling sessions. This is the case for many vulnerable clients and families. Social Workers also receive referrals in the postnatal period. Midwifery Group Practice Midwives at Murwillumbah and Byron also refer to Social Work Services. Social Work Services are available Monday to Friday 8.30am-5.00pm.

Workforce

- 1.0 FTE Social Worker covers ED, Surgical Ward, Paediatrics, and Women's Care Unit, including the Special Care Nursery, Antenatal and SAFE START referrals;
- 3.2 FTE Social Workers - The Tweed Hospital and Community Health (excluding Sexual Assault Services);
- 1.8 FTE Social Work positons in Murwillumbah District Hospital and Community Health;
- 0.6 FTE Child and Family Counsellor and other generalist services.

6.16 Child and Family Health Nursing Service

Child and Family Health Nursing Services provide a primary health care service to families with children 0 to 5 years of age, living in the Tweed and Byron Shires. All families with a newborn are offered at least one home visit within the first 2 weeks of birth. Follow up home visits are offered to vulnerable families and families requiring extra support with parenting. Child and Family Health Nurses work closely with other service providers and make appropriate referrals where required.

New Parents Groups are held at Kingscliff and Tweed Heads weekly for parents with infants 0 to 6 months. The In-Home Sleep and Settling Service is provided to support families with settling infants in their own home. Families across the Health Service Group are encouraged to follow up with the service for age appropriate child health and developmental screenings as per the NSW Personal Health Record.

In Byron Shire an Early Bird Baby Group targeting infants 0-6 months operates weekly. Infants are referred to Kids Screen if development issues are identified and Lismore Family Centre for sleeping and settling issues.

The core business of Child and Family Health Nurses is the provision of Universal Health Home Visiting within the context of NSW Health's child and family health service system. Families including those receiving support through a Midwifery Group Practice model are offered a home visit within the first 2 weeks of birth. If they decline a home visit they are offered a clinic appointment.

Universal Home visiting includes:

- The offer and provision of at least one home visit within 2 weeks of the birth of the baby;
- The primary health care assessment is conducted in the home; however there will be occasions when assessments will be provided in the clinic setting;
- The infant's 1-4 week child health check, conducted as per the Personal Health Record and in accordance with key Government policy directives, guidelines and relevant documents relating to child and family health nursing;
- Review of the maternal antenatal psychosocial risk assessment and domestic violence screen transferred by the maternity service with the mother if available;
- A comprehensive primary health care assessment is conducted if no previous assessment has been attended or the results are not available.

6.17 Aboriginal Health - Child and Family Health Nursing Service

This service is funded by the Office for Aboriginal and Torres Strait Islander Health for Aboriginal families with children 0 to 5 years of age. The service offers provision of Universal Health Home Visiting, Early Childhood Clinic and Immunisation Clinics and the Home Immunisation Program in the Tweed Shire. The service operates 3 days per week from 8.00am to 4.30pm.

6.18 Mental Health Services

In the Tweed Byron Health Service Group universal psychosocial assessment and depression screening is implemented in Maternity and Child and Family health services including formal adoption of validated tools and domains of psychosocial risk assessment.

All women are asked to complete the Edinburgh Depression Scale (EDS) at booking in. From this depending on the scores/responses referrals are made. At a minimum SAFE START referrals are made and depending on clinical need the referral may be escalated to Mental Health.

The Tweed Mental Health Service work collaboratively and in partnership with the Maternity and Newborn Services and the patient. The Tweed Mental Health Service will provide both an assessment and treatment service for women experiencing postnatal depression which cannot be safely and effectively managed by a GP through the Better Access Program.

The criteria for referral to the Tweed Mental Health Service for postnatal depression are:

- Current suicidal ideation;
- Edinburgh Depression Scale (EDS) positive response to question 10;
- Acute current mental health issues not managed e.g. Depression.

Mental Health Services pathways to care include:

- Consultation with no direct clinical intervention;
- Consultation with clinical assessment;
- Limited mental health intervention;
- Acute community based mental health care;
- Hospital based mental health care.

All health care providers can contact the Intake Officer at Tweed Community Mental Health during business hours on 07 5506 7370. After hours referrals are through the Mental Health Line on 1800 011 511. The Tweed Mental Health Service does not manage Queensland residents and will refer on to the relevant Queensland Mental Health Provider.

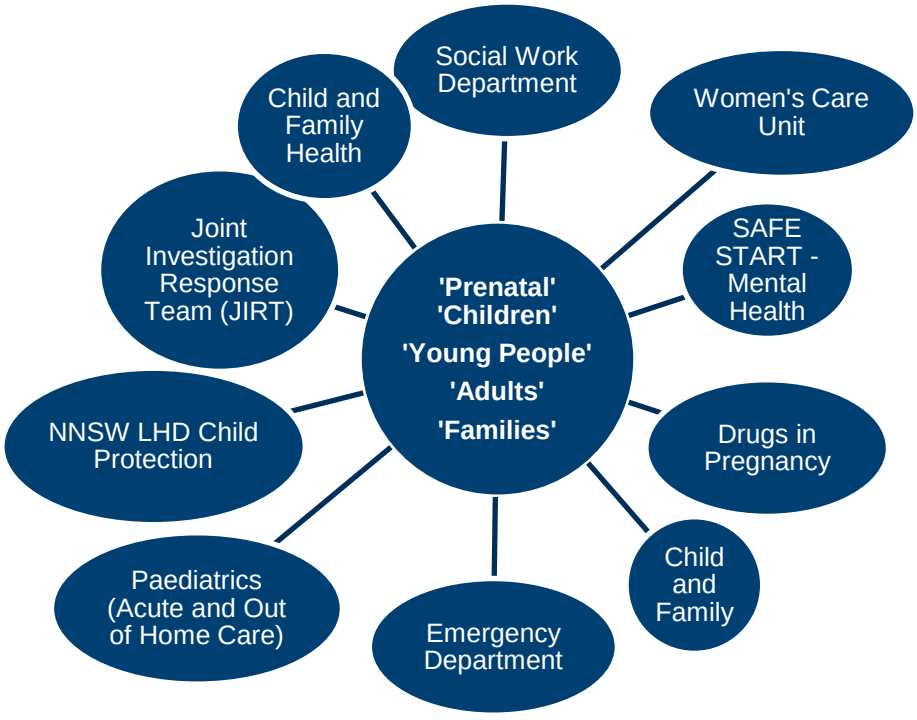
6.19 PROMOTING CHILD WELLBEING IN TWEED HEADS HEALTH SERVICES

NNSW LHD staff also has professional and legal responsibilities to promote the health, safety, welfare and wellbeing of children and young people, working collaboratively with interagency partners in the shared system of child protection in NSW. These responsibilities apply whether workers are providing health care directly to children and young people or to adult clients who are parents/carers or are pregnant.

Tweed Byron Health Service Group Services work in collaboration (and in silos) to promote child wellbeing and reduce the incidence of child abuse and neglect. The Tweed, Murwillumbah District and Byron Central Hospitals Maternity Units play a pivotal role in either ensuring child protection issues do not arise, in identifying suspected abuse and neglect and in working with interstate partners (under duty of care) to prevent further harm to unborn children, children and young people.

The main NNSW LHD services working together in the Tweed Byron Health Service Group are identified in Figure 1 below. Mental Health and Drug and Alcohol Services work in partnership with a range of services including Birthing Units, Social Work and Counselling, Child and Family Nurses, Early Discharge Midwives, Sexual Assault Services and others. There are other services which support child wellbeing including Oral Health, Sexual Health and Aboriginal Health. The Tweed Hospital Social Work Department also coordinates the domestic violence interagency response under the Safety Action Meetings Framework led by NSW Police Tweed Local Area Command (Tweed Byron Health Service Group). These meetings assist in coordinating care for the most at-risk women in domestic violence situations. Referrals to the meetings are made by NSW Police.

Figure 1: Main NNSW LHD services working together or in isolation to assess and respond to child wellbeing and protection issues



Child Protection information exchange occurs mainly across health services, statutory child protection (NSW Family and Community Services – (FACS) and Queensland Department of Child Safety) and NSW and Queensland Police.

6.20 PARTNERSHIPS

Tweed Byron Health Service Group Maternity and Newborn Services work in partnership with a range of government and non-government agencies including:

- Community and Allied Health Services;
- Aboriginal Health Services;
- Joint Investigation Response Team-Child Protection;
- Violence and Neglect Services;
- Mental Health and Drug and Alcohol Services;
- GPs and VMOs;
- North Coast Primary Health Network;
- Bugalwena General Practice;
- Non-Government Organisations;
- Government Departments such as NSW Department of Family and Community Services and NSW Police;
- NSW Ambulance;
- Australian Breastfeeding Association and other consumer organisations;
- Private health care providers.

6.21 NORTH COAST PRIMARY HEALTH NETWORK

The Primary Health Networks form a national network of primary health care organisations and are an integral part of the National Health Reform Agreement. Primary Health Networks have been established as independent legal entities with links to local communities, health professionals, service providers and consumer and patient groups.

The North Coast Primary Health Network was established on 1 July 2015. The North Coast Primary Health Network boundaries align with NNSW and MNC LHDs, providing the opportunity for efficient care coordination and effective service integration across the region by building on strong relationships with the Boards and Executives of the two LHDs.

Women with perinatal depression are a target group for ATAPS funding for 10-12 counselling sessions. ATAPS is provided through Healthy Minds on the NSW North Coast. In order to improve access to psychological services, Healthy Minds ATAPS referrals can be made by a wider variety of professionals compared to Medicare. Under Healthy Minds ATAPS perinatal referrals can be made by GPs, Psychiatrists, Obstetricians, Midwives and Maternal and Child Health Nurses. There is an active referral pathway from clinicians at Murwillumbah District Hospital and The Tweed Hospital to the Healthy Minds Perinatal Service.

Additionally, Healthy Minds co-locates Allied Mental Health professionals within the Family Centre at their Tweed Heads site (1/14 Amber Rd, Tweed Heads South) and Murwillumbah Community Centre (Nullum St, Murwillumbah NSW 2484).

BUGALWENA GENERAL PRACTICE

The Bugalwena General Practice (Bugalwena) provides high quality and accessible primary health services to Aboriginal people in the Tweed region through a community driven, culturally appropriate and multidisciplinary primary health care service. There are no specific entry criteria other than being an Aboriginal person. People access the service by making an appointment via telephone or in person.

Bugalwena is a bulk billing practice. Three GPs provide services 5 days per week to thousands of patients each year. Registered Nurses, a Dietician, Diabetes Educator, Exercise Physiologist and Aboriginal Health Practitioner also provide services. An Optometrist Clinic is held periodically. In addition, the practice runs health workshops and fitness groups for the community and is a key participant at community events such

as Close the Gap day and NAIDOC week. Bugalwena General Practice also offers prenatal and postnatal shared care arrangements as a standard general practice service.

Bugalwena is managed by the North Coast Primary Health Network and has a strong partnership with the Bugalwena Advisory Group. The service utilises the Medicare Benefits Schedule and also receives grant support from the Federal Government Department of Health.

More information can be found on their website:
http://www.ncml.org.au/index.php/programs-services/our-services/item/432

6.22 Private Hospitals

According to the National Maternity Services Plan (2010) in 2007 of the women who gave birth in a hospital, 70.2% (196,960 women) were in the public system and 29.8% (83,713 women) were in the private system. Private hospitals in close proximity to the Tweed Byron Health Service Group are John Flynn Private Hospital, Tugun, Queensland and Pindara Private Hospital, Southport, Queensland.

John Flynn Private Hospital - Queensland was the first "Baby Friendly" hospital, accredited by UNICEF and the World Health Organisation (WHO). The hospital provides childbirth and parenting programs, waterbirth options, and Special Care Nursery (for sick or premature babies greater than 32 weeks' gestation).

Pindara Private Hospital Maternity Unit on the Gold Coast is accredited through the Baby Friendly Health Initiative and provides birthing options and parenting education. The Special Care Nursery is equipped with the latest equipment should a baby be sick or premature (from 32 weeks' gestation).

6.23 Private Midwifery Services

A public hospital maternity service may wish to participate in a collaborative arrangement that may involve one or more staff specialists and/or visiting practitioners appointed to the service, with the resulting collaborative arrangement effectively becoming an agreed protocol for a Privately Practising Eligible Midwife (PPEM) seeking access to the service.

GL2015_014 Guideline for the Provision of Private Midwifery Services by Eligible Midwives in NSW Public Hospital describes the process for the provision of private midwifery services by eligible midwives in NSW public hospitals. NNSW LHD has not entered a collaborative arrangement with PPEMs.

6.24 Tertiary Referral Networks

PD2010_069 relates to critically ill neonates and women with high risk pregnancies that require inter-hospital transfer. The Tweed Byron Health Service Group has escalation plans in place to ensure the appropriate accommodation of a neonate or a pregnant woman. In the first instance, local escalation plans promote the tiered network of services within the Health Service Group and the Perinatal Services Network. The local escalation plan which applies to each birthing unit in the Health Service Group articulates procedures for clinicians to seek advice and/or support beyond their designated Network.

For women who develop high risk obstetric and/or fetal complications at The Tweed Hospital this will mean travelling outside NNSW LHD to level 6 role delineated maternity services with tertiary and neonatal intensive care services located in Brisbane. Tertiary perinatal centres have specialist obstetric consultants available to provide clinical management and maternal transfer advice. If the tertiary consultant is unable to assist a 24-hour feto-maternal specialist advice line exists. All facilities in the Tweed Byron Health Service Group have protocols in place for immediate management of obstetric emergencies.

The tertiary referral location is the Gold Coast University Hospital or Brisbane hospitals depending on availability, reason for transfer and at times patient preference. The Perinatal Advice Line assists with arrangements and/or advice regarding place and timing of transfer to the tertiary facility.

6.25 Health Transport Services

6.25.1 Medical Retrieval Services

Tweed Byron Health Service Group has relationships with two emergency retrieval services being NSW Ambulance which manages the Aeromedical and Medical Retrieval Services (AMRS) and the Queensland Coordination Centre managed by the Queensland Department of Emergency Services. These networks are jointly coordinated meaning that one phone call from a trauma centre or critical care unit activates the service identifying a placement in either NSW or Queensland matched to the acuity of the patient and all transport arrangements in a timely manner.

NSW Ambulance is available 24 hours per day/7 days per week and provides a range of transport services including:

- Primary emergency calls within each community of the NNSW LHD catchment;
- Transporting critically ill and injured patients from Byron Central and Murwillumbah District Hospitals to The Tweed Hospital or to tertiary facilities in Queensland.

There is a Neonatal Clinical Emergency Response System (CERS) Plan for neonates requiring additional care. Emergency retrieval services are organised via the NSW Newborn Emergency Transport Service (NETS). Retrieval Service Queensland (RSQ) provides a retrieval service from Northern NSW to retrieve neonates and children to centres in Queensland including the Royal Children's Hospital and the Lady Cilento Children's Hospital. There are well established cross border relationships between Paediatricians.

6.25.2 Non-Emergency Transport Systems

The Transport for Health Policy issued in 2006[21] established a framework to simplify and improve patient access to health services. Informed by this policy and the Aboriginal Health Partnership Agreement (between the AMRC and the NSW Department of Health) the former North Coast Area Health Service (NCAHS) issued a Health Implementation Plan in 2007 to put in place an integrated service for non-emergency transport services known as the Transport for Health Program with the following characteristics:

- Administered by the Health Transport Unit located at Port Macquarie which brokers with a wide range of appropriate transport providers to assist patients who lack personal access to transport due to socio-economic or geographic disadvantage;
- Operates between public and private healthcare and diagnostic facilities in the NNSW and MNC LHDs;
- Encompasses Inter-Facility Transport/Inpatient Transport;
- Covers Non-Emergency Health Related Transport;
- Includes the requirements of the Isolated Patient Travel and Accommodation Assistance Scheme (IPTAAS) – a subsidy program to assist people travelling more than 100km from their home for health services (including appointments);
- Access to a range of transport modalities to meet individual needs including patient transport vehicles, NSW Ambulance, private fixed wing aeromedical craft and LHD fleet vehicles.

[21] *NSW Health, Transport for Health, 2006-2011*

7. SERVICE ENABLERS

7.1 WORKFORCE

Health workforce planning is a high priority for NNSW LHD whose strategic directions include 'developing a skilled and motivated workforce in a culture based on our core values'. It is only through developing a sustainable workforce that the Tweed Byron Health Service Group will be able to implement the various clinical service developments described in the Tweed Byron Health Service Group Maternity and Newborn Services Plan.

A range of workforce management strategies in place in NNSW LHD include:

- Advertisement and recruitment systems (Mercury eRecruit);
- Targeted advertising on College websites;
- Human resource information systems (StaffLink);
- Rostering/staff scheduling systems (HealthRoster);
- Education and training systems (HETI Online, ClinConnect);
- Centralised recruitment and staffing system;
- Workforce Management Committee;
- Staff Development and Research Committee;
- Employee services and personnel records and orientation and relocation.

Nursing workforce is detailed in each section of the Plan.

7.1.1 NURSING AND MIDWIFERY WORKFORCE

The Nursing and Midwifery workforce working in Maternity and Newborn Services is supported by the Clinical Midwifery Consultant based at Mullumbimby and District War Memorial Hospital. This is an LHD wide positon. Some of the mandatory education sessions are arranged on an LHD wide basis with resources shared and the participants can attend at any of the five facilities across the LHD on an annual basis. There are additional formal workshops/education sessions that are LHD based for all to attend.

Midwifery Services need to remain abreast of contemporary knowledge and skills. There is a Clinical Midwifery Educator - 1.0 FTE based at The Tweed Hospital for The Tweed Hospital. There are no additional established education positions in the Tweed Byron Health Service Group.

All of the facilities in the Health Service Group, including the level 2 facilities accept Midwifery students. There are Student Facilitators nominated from within the staffing establishment who will have a portion of the hours nominated to support the student's education and supervision.

7.1.2 MEDICAL WORKFORCE

There are 3.0 FTE Staff Specialists in Obstetrics and Gynaecology based at The Tweed Hospital. These are Health Service Group wide appointments. The Director Obstetrics and Gynaecology for the Tweed Byron Health Service Group has responsibility for managing and coordinating the Medical workforce for their Department including engagement of Registrars. There are also 3.0 FTE Obstetrics and Gynaecology Specialist VMOs.

There are 6.0 FTE Registrars who provide round the clock cover on-site for labour ward and emergencies at The Tweed Hospital, and support for antenatal clinics, gynaecology outpatients and surgery at both The Tweed and Murwillumbah District Hospitals. There is a nominated medical role responsible for education, training, supervision and support.

There are three VMO Paediatricians and 1.6 FTE Staff Specialists in Paediatrics based at The Tweed Hospital. These are Health Service Group wide appointments. The Director of Paediatrics for the Tweed Byron Health Service Group has responsibility for managing and coordinating the Medical workforce for their Department including engagement of Registrars. There are 4.0 FTE Paediatric Registrars who work at The Tweed Hospital and are part of the on-call roster for the Health Service Group.

The Director of Paediatrics has the nominated medical role responsible for education, training, supervision and support.

7.1.3 Allied Health Workforce

Allied Health services are an integral component of the multidisciplinary models of care required for delivery of contemporary healthcare. The expertise of specialised Allied Health services, in the management of acute and community based care systems, deliver a range of benefits to the individual patient and the health care system. In addition, Allied Health staff provides stand-alone discipline specific services to many clients.

Demand for Allied Health services have seen continued significant growth with limited increase in allocated Allied Health staffing numbers. Allied Health staff are critical to providing an appropriate and timely response to concerns about child wellbeing, patients exhibiting symptoms of postnatal depression, families with complex social issues and provision of SAFE START. Paediatric Therapists provide a range of interventions to infants who are admitted to the Special Care Nursery and their families. Diabetes Educators and Dieticians provide core services to women diagnosed with GDM.

7.2 Clinical Supervision

Clinical supervision is vital to support the practitioner and maintain a professional service that focuses on the client's needs. LHDs are to ensure that staff receive regular clinical supervision. Clinical supervision focuses on the health professional, his or her clinical practice and the client. The key function of a clinical supervisor is to provide an environment where the health professional can feel 'safe' to discuss, reflect upon and explore clinical experiences and issues. The supervisor is usually a health professional who is able to provide additional expertise, knowledge and skill. This supervisor should not have direct managerial responsibility for the person whom they are supervising.

Approaches to clinical supervision include:

- Individual – the health professional and the supervisor meet on a regular basis to discuss clinical cases and experiences. This approach will be most appropriate for staff involved in home visiting more complex/vulnerable client groups;
- Group – the supervisor meets several health professionals on a regular basis to discuss clinical cases and experiences. This method of supervision has the added advantage of group members learning from their colleagues' experiences and will be most appropriate for all staff working with families;
- Peer support can be used to provide additional opportunities for discussion about clinical practice issues and/or the opportunity to review literature. No formal supervisor is included in this group discussion;
- Clinical supervision in this context is a staff support strategy as described in the HETI document-The Superguide;
- Clinical Supervision (reflective).

7.3 Work Redesign

NNSW LHD advocates that a key enabler to effective health service provision is the activation of evidence-based models of care which are continually monitored and evaluated to ensure their effectiveness and to promote adaptation as needs change.

"It aims to ensure that people get the right care, at the right time, by the right team and in the right place."[22]

Tweed Byron Health Service Group is actively involved with the Agency for Clinical Innovation (ACI), the lead agency in NSW for designing and implementing innovative and effective models of care. The organisational structuring, service groupings, clinical networks and service models actively planned and implemented by NNSW LHD.

7.4 Information Communication Technology (ICT) Infrastructure

The provision of effective, efficient and appropriate Information and Communication Technology (ICT) systems and services are a foundational element for the provision of high quality health services to the local population across NNSW LHD.

The ICT Strategy includes the provision of an information infrastructure to support clinical service delivery through a capable and reliable computer network, fixed and mobile end user devices, patient monitoring systems, real time imaging in Operating Theatres, eHealth and Telehealth and a suite of clinical software tools that comprise the eMR and administrative support software including human resources, rostering, payroll and financial services tools.

Information management is essential to support continuous improvement in clinical outcomes, greater coordination of care, better access to information and for the ability to use information to improve management decision-making.[23]

Increasingly eHealth opportunities will need to be identified and exploited to diagnose, provide care, reduce the need for travel, link colleagues, patients and clinicians across distant sites, manage data to inform management decisions and ensure economical and efficient rural-specific solutions to service delivery problems. In the rapidly evolving fields of medical technology and clinical techniques for diagnosing and treating conditions more modalities are becoming feasible and economical at a district level. It has been identified that the Tweed Byron Health Service Group will need to provide and support some of these innovations now and into the future to attract and maintain clinical practice and meet community expectations.

7.4.1 Obstetrix

*e*Maternity will replace the current ObstetriX database in June 2016. The new version will have a web based platform that will enable greater connectivity in a variety of settings. This may provide the opportunity for remote access by clinicians and greater efficiency with access to the required clinical information usually available in hospital settings alone.

The Integrated Care Project is expected to result in shared electronic care plans with GPs, admission notifications and secure messaging between primary and acute health care providers.

7.5 Medical Records and Health Information

NNSW LHD identifies the importance of clinical information systems to provide efficient and quality health care. Contemporary health service delivery is dependent on the collection of relevant standardised data

[22] *NNSW LHD Healthcare Services Plan op. cit. p317*
[23] *NSW Information Management Strategy 1999-2002*

across all modalities to inform local, regional and state-wide planning, inform Activity Based Funding, to monitor performance and to evaluate outcomes.

Implementation of an eMR2 is a multi-year program initiative by the NSW Ministry of Health to replace the paper medical record with an online record. The planned roll-out is phased. This will be rolled at The Tweed Hospital in 2016.

Access via computer terminals to the eMR, including documentation, test results and diagnostics, is required at the point of care, staff stations, offices and key locations throughout departments. Paper record management and storage will continue to be necessary during the transition to electronic records and into the future, with secure paper record storage required in all clinical areas. Inpatient medical records are kept for 10 years for adults (7 years for outpatients), 25 years for children and permanently for obstetrics.

The eMR will be a single medical record for all clients whether they are seen in community, ambulatory or inpatient settings (this is dependent on all services using an Area Unique Identifier).

A number of services will use existing health information systems including Primary and Community Health Services who have recently introduced Community Health and Outpatient Care (CHOC).

8. Implementation and Evaluation

Tweed Byron Health Service Group Maternity and Newborn Services in consultation with the full range of key service providers are responsible for implementing the Plan and reporting on progress. Implementation of the Plan will be staged across the 5 year time frame and actions will be prioritised as part of the annual work plan process for the Tweed Byron Health Service Group.

Implementation of the Plan will require leadership and support from the Tweed Byron Health Service Group Executive. In order to develop an integrated service delivery model for Maternity and Newborn Services across the Health Service Group a governance committee which includes representation from the full range of maternity and newborn services will be formed. The Governance Committee will collaboratively develop an annual business plan and will meet regularly to monitor implementation of the Plan and to review achievement of KPIs.

The following table outlines the strategic directions, key priorities and actions for Tweed Byron Maternity and Newborn Services over the next 10 years. Strategic actions have been developed collaboratively with all partners to the Plan engaged throughout the planning process. Every attempt has been made to address concerns raised at consultation sessions.

STRATEGIC DIRECTION 1: CARING FOR WOMEN AND BABIES

OUTCOME: Better access to care from early pregnancy, evidence based options for birth and improved transition from postnatal to parenthood services

KEY PRIORITY 1: Help parents prepare for pregnancy and improve their health

No.	Strategies	Actions	Responsibility	Partners	Outcome/Measure
1.1	• Support women and their partners to prepare for pregnancy and birth.	• Review prenatal education and explore alternate options to delivery of education which is responsive to evidence and consumer request; • Ensure the provision of formal prenatal education sessions/classes meet the National Antenatal Childbirth Education (NACE) competency standards; • Include education on "Next Birth after Caesarean" in antenatal education; • Ensure antenatal education meets the needs of all prospective parents including those with complex needs.	Clinical Midwifery Consultant (CMC)	Parenting Educators Midwives O&Gs GPs Clinical Nurse Consultant (CNC) Child and Family Consumers	• Antenatal education reviewed and updated.
1.2	• Promote the health of prospective parents for the future health of their children.	• Review the promotion of health of prospective parents for the future health of their children: ○ Provision of health promotion resources through Antenatal Clinics, Midwifery Group Practices and Prenatal Education; ○ All women who smoke are referred to Quitline and can access the Helping U 2 Quit Program; ○ All women are provided with information to increase awareness of environmental tobacco smoke within homes and cars to reduce long term exposure to tobacco smoke for Aboriginal children; ○ All women having an Aboriginal baby who smoke are referred to Quit for new life.	CMC	Antenatal Clinic Coordinators Midwives O&Gs Paediatricians GPs North Coast Primary Health Network (NCPHN)	• 100% women who smoke are referred to Quitline; • 100% women having an Aboriginal baby who smoke are referred to Quit for new life.
1.3	• Inform and include fathers/partners in pregnancy, antenatal	• Continue to encourage fathers to attend the Childbirth and Early Parent Education Program with their pregnant partner or wife across the Health Service Group;	Parenting Educators	Maternity Services	• Program evaluated and assessed for expansion.

No.	Strategies	Actions	Responsibility	Partners	Outcome/Measure
	care and preparation for parenthood.	• Byron Shire Community Health Service is working with Ballina Parent Resource Centre to provide a program specific to men in the antenatal period; evaluate the program with a view to expansion into other services.	Byron Shire Community Health Nurse Unit Manager (NUM)	Ballina Parent Resource Centre Consumers	

KEY PRIORITY 2: Improve access to high-quality, woman-centred care from early pregnancy

	Strategies	Actions	Responsibility	Partners	Outcome/Measure

2.1	• Early engagement with evidence-based antenatal care for all pregnant women and partners.	• Ensure antenatal care is provided within role delineation and at an appropriate level providing timely access to high risk services;
		• Clearly define the entry criteria and catchment boundaries for each Birthing Service;
		• Ensure all women returning to a service following a previous birth are given priority access if they still reside in that area and the service has the capability for their current condition/situation;
		• Develop a central intake system for Tweed Byron Health Service Group Birthing Services Maternity bookings;
		• Integrate the provision of Antenatal Clinics at Murwillumbah District Hospital (MDH) and The Tweed Hospital (TTH) through development of a central intake and referral process;
		• Develop a communications strategy to inform staff, GPs and the community of the entry criteria and service boundaries to assist women to make an informed choice about the most appropriate model of maternity care available to them including:
		  ○ Development of a website for Tweed Byron Health Service Group (TBHSG) Maternity and Newborn Services;
		  ○ Development of a Health Service Group information package;
		• Ensure all staff who provide information on available services are providing consistent messages;
		• Expansion of the Outpatients Department at The Tweed Hospital to improve capacity for Obstetrics and Gynaecology Clinics;
		• Redevelopment of the Outpatients Department at Murwillumbah District Hospital as part of the Women's Care Unit to improve capacity for Obstetrics and Gynaecology Clinics;
		• Plan for development of Outreach Antenatal/Gynaecology Clinics from The Tweed Hospital to Byron Central Hospital (BCH) for high risk local women;
		• Improve coordination of pre-pregnancy counselling services throughout the Health Service Group.
			Clinical Director O&G
			Midwifery Unit Managers (MUMs)
				GPs
				Medical Officers
				Midwives
				Consumers
					• Women access the service ≤ 14 weeks' gestation;
					• Aboriginal: 90%;
					• Non-Aboriginal: 90%;
					• 90% of women allocated the correct model of care and location;
					• Women report efficient processes in accessing services.

	Strategies	Actions	Responsibility	Partners	Outcome/Measure
2.2	• Provision of evidence-based antenatal care for pregnant women with Diabetes Types 1 and 2 and GDM.	• Further development of Diabetes Services to meet increasing demand for the service aligned with best practice models of care including: ○ Review and consolidation of clinical pathways for all women diagnosed with GDM including all steps in the patient journey prior to and post-delivery; ○ Develop a clinical pathway to ensure early referral of women with GDM to the Diabetes Team; ○ Continue to develop the multidisciplinary team focus from diagnosis to postnatal period in consultation with key service providers; ○ Consider development of a specialist Diabetes in Pregnancy Clinic with Endocrinologist to replace the shared clinic currently in operation at The Tweed Hospital; ○ Establish regular multidisciplinary case review meetings; ○ Coordinate follow up appointments for women with GDM with Obstetricians, Diabetes Educator, Dietician, Parenting Educator and Social Work so that appointments are available on the same day in the same venue at The Tweed Hospital following similar “Care Bundle” models; ○ Once the Diabetes Dietician commences at The Tweed Hospital, develop Best Practice Standards for GDM e.g. all GDMs in Tweed Byron Health Service Group to be seen by a Dietician within 1 week of diagnosis; ○ Roll out coordinated GDM Groups with Diabetes Educator, Dietician and Parenting Educator to all sites in the Health Service Group to maintain consistency and access to services and to improve time management and efficiency; ○ Collaborate with Robina Hospital to review service provision to women diagnosed with GDM to ensure timely commencement of insulin and coordination of management and communication;	Diabetes CNC Diabetes CNC Diabetes Dietician Diabetes CNC Diabetes CNC	Diabetes Team Consumers Child and Family Health Nurses (C&FHNs) Diabetes Team Parenting Educators Diabetes CNC Midwives Dietician Parenting Educators Robina Hospital	• Clinical pathway developed; • Regular multi-disciplinary case review meetings established; • Best Practice Standards for GDM developed; • Service provision to women diagnosed GDM who attend Robina Hospital reviewed;

	Strategies	Actions	Responsibility	Partners	Outcome/Measure
		○ Develop a policy and protocols to support women with GDM to be taught to self-titrate insulin as per Endocrinologist request to decrease elevated BGLs between reviews; ○ Review the meals supplied by The Tweed Hospital for women with GDM; ○ Ensure postnatal depression assessment and follow up of GDMs occurs due to complex gestational period; ○ Provide access to a suitable space to provide GDM groups at all sites; ○ Provide capacity for staff to communicate through SMS as part of the service.	Diabetes Dietician O&Gs Midwives TBHSG Executive	Food Services Safe Start ICT	• Policy and protocols to support women with GDM to be taught to self-titrate insulin developed; • Capacity for staff to communicate through SMS provided.
2.3	• Provision of equitable access to maternity care that ensures continuity of care and improves women's experience and outcomes.	• Support the sustainability of Midwifery Group Practice models across the Health Service Group: ○ Develop a consultation process to consider service naming to clearly differentiate Tweed Valley Birthing Service from The Tweed Hospital Birthing Service; ○ In the short term in consultation with Friends of Tweed Valley Birthing Service promote the Tweed Valley Birthing Service including consolidation of initiatives currently under development: – Development of a website for the Tweed Valley Birthing Service; – Development of information packages; • Integrate Tweed Valley Birthing Service communication strategy into the Health Service Group wide strategy; **Refer 2.1** • Evaluate the Byron Community Birthing Service for capacity to meet community needs and feasibility for expansion; • Implement the Tweed Midwifery Group Practice and integrate this as an option for normal risk women from The Tweed Hospital catchment area;	MUM Murwillumbah Women's Care EO DONM BCH DONM TTH	Midwives Friends of Tweed Valley Birthing Service Director O&G; CMC Consumers Director O&G; CMC	• Service name reviewed; • Website and information packages developed; • Formal evaluation undertaken;

	Strategies	Actions	Responsibility	Partners	Outcome/Measure
		• Future planning to include the transition of The Tweed Hospital Midwifery Group Practice to include women with identified risk factors at time of access to service; • Further develop the Midwifery Group Practice models at all sites to enable transition to higher level with continuity of care as risk is identified; • Increase the option for homebirth provided by Midwifery Group Practice models at Byron Central Hospital and Murwillumbah District Hospital; • Undertake a gap analysis of the key measures contained within PD2010_045 "*Maternity - Towards Normal Birth in NSW*". and develop an action plan based on the results; • Redesign the current postnatal model of care at all sites to consider both inpatient and community based postnatal care for all women; • New facility planning to include provision of accommodation for women to "room-in" in the vicinity of the Special Care Nursery when newborns are admitted.			• 100% target KPIs for PD2010_045 met by 2019.
2.4	• Strengthen partnerships with Aboriginal communities to jointly design and deliver maternity care.	• In consultation with Bugalwena Advisory Committee investigate funding opportunities to establish an AMIHS in the Health Service Group.	NNSW LHD Women's Health Coordinator	Manager Aboriginal Health TBHSG Executive Bugalwena Advisory Committee	• Funding application completed and submitted.
2.5	• Customise care and information for those from culturally and linguistically diverse backgrounds.	• Refer all women having an Aboriginal baby who smoke to Quit for new life. **Refer 1.2**	All staff		• 65% of women having an Aboriginal baby who smoke are referred to Quit for new life.

KEY PRIORITY 3: Strengthen provision of safe, evidence based birth options

	Strategies	Actions	Responsibility	Partners	Outcome/Measure
3.1	• Inform pregnant women and partners about birth options in their local area appropriate to their level of risk.	• Develop a communications strategy to inform staff, GPs and the community of the entry criteria and service boundaries to assist women to make an informed choice about the most appropriate model of maternity care available to them; • Include an annual work plan for key service providers to be convened by CMC. **Refer: 2.1**	TBHSG Maternity and Newborn Services Governance		• Communication strategy developed and implemented.
3.2	• Provide care that promotes normal birth in an environment that is inclusive of fathers /partners and families.	• Inform all pregnant women about the benefits of normal birth and factors that promote normal birth throughout their pregnancy and provide resources to support normal birth philosophy; • Ensure all new facilities have capacity to accommodate fathers /partners and are of a contemporary design. **Refer 3.7 and 3.8**	Midwives TBHSG Executive	O&Gs Consumers	• Positive consumer evaluation; • Maintain current perinatal data outcomes.
3.3	• Develop evidence-based standards of clinical care and promote their uptake.	• Enable the continuation of the External Cephalic Version (ECV) Services through continued skill development to decrease the caesarean section rate: ○ Maintain a skilled workforce to support ECV; • Implement cardiotocography (CTG) with telemetry capabilities at The Tweed Hospital to allow active movement of the woman during labour that requires the fetus to be monitored; • Develop and implement formal referral protocols to Allied Health services from the Special Care (SCN) at The Tweed Hospital; • Continue to plan for more specialised Dietetics Services.	CMC O&Gs Midwives MUM Women's Care TTH Allied Health Manager	O&Gs Midwives CMC TBHSG Executive Allied Health and SCN staff	• Increased success rate for ECV at TTH; • Implementation of telemetry.

	Strategies	Actions	Responsibility	Partners	Outcome/Measure
3.4	• Provide clinicians with consistent processes to escalate care for at risk mothers and babies.	• Undertake a gap analysis to examine the current system for neonatal resuscitation training for non-midwives who may assist with birth (e.g. Rapid Response Teams and ED staff); • Develop and implement a system to ensure relevant education, training and assessment of competency in neonatal resuscitation for non-midwives; • Plan for the establishment of a Neonatal Retrieval Team based at The Tweed Hospital for critically ill neonates from Byron Central and Murwillumbah District Hospitals; • Develop referral and consultation pathways and processes for neonates requiring this LHD retrieval; • In collaboration with paediatricians develop and implement protocols for consultation via high definition cameras; • Provide access to digital images and access to WiFi for midwives and paediatricians that meet the standards for transfer of digital images between service providers; • Promote the use of Telehealth facilities that enable timely consultation with specialist services in tertiary level facilities potentially minimising transfers and possibly decreasing length of stay and maximising patient care; • Establish processes for increased engagement with midwives in private practice caring for residents of the Tweed Byron Health Service Group to facilitate seamless transfer to health facilities when required; • Explore the feasibility of formal arrangements for midwives in private practice to develop collaborative arrangements with health facilities as per GL 2015_14.	Clinical Director Paediatrics CMC TBHSG Executive TBHSG Executive TBHSG Executive DON&M	Paediatricians Registrars NSW Ambulance Tertiary Referral Hospitals Paediatricians Midwives ED Director MUMs Midwives Midwives in Private Practice Consumers	• Neonatal retrieval team established and evaluated; • Protocols developed; • Utilisation of Telehealth increased; • Case reviews conducted for all transfers to TTH from private midwifery model; • Position statement developed.
3.5	• Develop strategies to improve the normal birth rate and outcome for mothers and babies by implementing	• Provide orientation to all new staff in the guidelines for normal birth; • As part of an LHD wide strategy develop formal training for all health care staff in the skills necessary to implement *Maternity – Towards Normal Birth in NSW;* • Introduce a continuity of care model at The Tweed Hospital;	CMC	NNSW LHD Maternity and Newborn Services O&Gs	• Training program developed and implemented;

	Strategies	Actions	Responsibility	Partners	Outcome/Measure
	the NSW Health Policy Directive 2010_045 *Maternity - Towards Normal Birth in NSW.*	• Provide one to one care to all women experiencing their first labour and twin birth monitor and measure compliance.	MUM Women's Care TTH		• 35% of women have continuity of care; • 100% of women experiencing their first labour and twin birth have one to one care.
3.6	• Develop strategies for supporting women to have a vaginal birth after previous caesarean.	• Further develop access to vaginal birth after caesarean (VBAC) section operation through ongoing development of education for staff at The Tweed Hospital; • Provide one to one care to all women experiencing VBAC, monitor and measure compliance.	CMC MUM Women's Care TTH	MUM Women's Care TTH O&Gs	• 100% of women experiencing a VBAC have one to one care; • 605 successful VBACs.
3.7	• Develop strategies and resources in response to barriers preventing the implementation of some aspects of NSW Health PD2010_045 *Maternity - Towards Normal Birth in NSW* including the implementation of models of care that allow water use in labour and birth.	• As part of a redevelopment of The Tweed Hospital: ○ New facility to utilise the concepts contained in the Birth Unit Design Spatial Evaluation Tool (BUDSET); ○ New facilities at The Tweed Hospital to have capacity to accommodate fathers/partners and are of a contemporary design; ○ Provision of facilities to care for bariatric maternity patients; ○ Increase the number of birthing rooms including provision for water immersion during labour and birth; ○ Provide access to a breastfeeding room for patients, staff and visitors; ○ Separation of gynaecological surgery inpatient beds.	TBHSG Executive	Staff and Consumers	• Included in service planning for the next stage of development for TTH.
3.8	• Improve choice for women by providing greater access to	• Implement the Midwifery Group Practice normal risk entry and all risk retained midwifery model at The Tweed Hospital;	MUM TTH	O&Gs Midwives	• Midwifery Group Practice normal risk entry and all

	Strategies	Actions	Responsibility	Partners	Outcome/Measure
	midwifery continuity of care models.	• Following successful implementation and integration of the service consider expansion to an all risk entry model; • Provide improved facilities for birthing at Murwillumbah District Hospital to improve the birthing environment to support sustainability of the service; • Increase the capacity of the Byron Community Birthing Service to accommodate increasing demand from Byron LGA residents and a portion of Ballina LGA residents; • Planning for a commensurate increase in the number of Midwives to support the increase in capacity of the birthing service; • Increments of 1.0 FTE for each 36 additional births including both hospital and home births resulting in a total of 180 births annually in 2017/18; • In the interim ensuring that residents of Byron Shire who meet the criteria for the Birthing Service are given priority access to the service; • Review of the Publically Funded Homebirth Service to include other facilities and consider expansion of the service in line with safety standards; • As part of the Health Service Group wide service development clearly define the boundaries, access point and entry criteria for the Tweed Valley Birthing Service and communicate these effectively to staff, GPs and the community: • Consider a name change to clearly differentiate the service; • In consultation with Friends of Tweed Valley Birthing Service promote the Tweed Valley Birthing Service including initiatives currently under development: ○ Development of a website for the Tweed Valley Birthing Service; ○ Development of information packages. **Refer 3.1**	TBHSG Executive TBHSG Executive MUM Women's Care Murwillumbah	CMC O&Gs Midwives Consumers O&Gs Midwives Consumers Key Service Providers Group	risk retained midwifery model implemented at TTH; • Planning for increased capacity in Byron Community Birthing Service undertaken; • Publically Funded Homebirth Service reviewed and expansion investigated; • Tweed Valley Birthing Service and boundaries reviewed and communicated to staff, GPs and the community; • Name of Tweed Valley Birthing Service reviewed in consultation with Friends of Tweed Valley Birthing Service.
3.9	• Implement the NSW Health Policy Directive 2009_003	• Continue to develop referral and consultation pathways and processes for women who require a higher level of care;	TBHSG Executive	Directors Paediatrics and O&G	• Pathways are established;

	Strategies	Actions	Responsibility	Partners	Outcome/Measure
	Maternity Clinical Risk Management Program.	• Develop admission and transfer policies and protocols to provide an appropriate level of care for women that present with a high BMI; • Establish a standard approach to risk management in all maternity services with timely and effective management of incidents with a consistent and coordinated approach to the identification, notification, investigation, analysis of incidents and near misses with appropriate action on all; • Enhance communication systems to ensure lessons learned are shared and all incident recommendations are implemented at all facilities as appropriate; • Enhance the reporting of aggregated data on nominated trigger incidents across all facilities and implement quality activities on outlying trends; • Conduct an annual snapshot evaluation from consumers of the services and utilise the results to improve services where possible/ appropriate; • Ensure that wherever a significant change to models of care/service delivery is proposed that a formal risk assessment is conducted as recommended by Treasury Managed Fund; • Ensure that the Maternity Services Standards and clinical care procedures defined within PD2009_003 are embedded in practice.		Maternity Services Committee Members Consumers	• Implementation of all recommendations at health facilities; • Survey is conducted each year; • Risk assessments are evident; • Standards and procedures are implemented and maintained.

KEY PRIORITY 4: Support transition from postnatal care to parenthood

	Strategies	Actions	Responsibility	Partners	Outcome/KPI
4.1	• Support, encourage and promote breastfeeding in accord with World Health Organisation Standards and the Baby Friendly Health Initiative.	• Ensure full implementation of PD2011_042, Breastfeeding in NSW - Promotion, Protection, and Support across Tweed Byron Health Service Group: ○ Have a written Health Service Group wide breastfeeding policy that is routinely communicated to all health care staff; ○ Train all health care staff in skills necessary to implement this policy; ○ Inform all pregnant women about the benefits and management of breastfeeding; ○ Help mothers initiate breastfeeding within half an hour of birth; ○ Show mothers how to breastfeed, and how to maintain lactation even if they should be separated from their infants; ○ Give newborn infants no food or drink other than breast milk, unless medically indicated; ○ Practise rooming-in - that is, allow mothers and infants to remain together - 24 hours a day; ○ Encourage breastfeeding on demand; ○ Give no artificial teats or pacifiers (also called dummies or soothers) to breastfeeding infants; ○ Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from the hospital or clinic; ○ Improve access to Lactation Consultants; • Ensure all the principles of the Baby Friendly Hospital Initiative are implemented at all sites and regularly monitored; • Consider access to breastfeeding rooms for patients, staff and visitors in all redevelopment opportunities;	TBHSG Executive TBHSG Executive Aboriginal Child and Family Nursing Service	Midwives Lactation Consultants Australian BreastFeeding Association CNC Child and Family O&Gs Midwives Parenting Educators	• PD2011_042, Breastfeeding in NSW - Promotion, Protection, and Support implemented across TBHSG; • Included in service planning; • Resources available to promote breastfeeding to Aboriginal women.

	Strategies	Actions	Responsibility	Partners	Outcome/KPI
		• Promote breastfeeding in Aboriginal women and their supporting community and increase awareness of cultural influences on breastfeeding.[24]			
4.2	• Support parents to provide a safe, nurturing and stimulating home environment.	• Maintain and review the current in-home sleep and settling model of care; • Provide access to parenting information/education sessions for group settings from websites such as the Raising Children Network.	Midwifery and Community Health Managers	Parenting Educators, Midwives Child and Family Nurses	• Model reviewed, evaluated and new model developed.
4.3	• Ensure all parents have access to culturally appropriate, postnatal care.	• Develop a consultation and engagement process including GPs to review and clarify the roles and responsibilities of each staff member and service provider within the Tweed Byron Health Service Group Maternity and Newborn Services providing home based postnatal care including: ○ Provision of home based postnatal care for at least 2 weeks post-delivery for all women; ○ Review of the Early Discharge Program with a view to expanding the role and philosophy of the service that is home based postnatal care as opposed to "Early Discharge"; ○ Review of service descriptions to ensure service boundaries are clear and entry criteria and times of operation are aligned; ○ Align time frames for postnatal care offered under the Midwifery Group Practice model across the Health Service Group and ensure consistency; ○ Review and confirm alignment with Child and Family Nursing services; ○ Review and confirm alignment with GCHHS boundaries;	TBHSG Maternity and Newborn Services Governance Committee TBHSG Executive	Early Discharge Midwives Child and Family Nurses CNC Child and Family GCHHS TBHSG Executive GCHHS	• 80% of women who birth in TBHSG receiving 2 weeks postnatal support after birth by 2019;

[24] *Source: https://www.researchgate.net/publication/271335613_Aboriginal_women_in_rural_Australia_a_small_study_of_infant_feeding_behaviour*

	Strategies	Actions	Responsibility	Partners	Outcome/KPI
		○ Work with GCHHS to develop support for Queensland residents birthing at Gold Coast University Hospital (GCUH); ○ Develop a Central Intake for provision of postnatal care for all Tweed Shire residents post discharge for all women not on a Midwifery Group Practice model of care; ○ Planning for expansion of community based postnatal care for women residing in the Byron Shire who deliver outside the Byron Community Birthing Service; ○ Development of a clinical pathway from birth to handover to Child and Family Nursing Services from community based postnatal care for all birthing models.	CNC Child and Family TBHSG Executive CMC	O&Gs Midwives Allied Health staff CNC Child and Family	• GCUH follows up all women who birth at GCUH who are residents of Queensland.
4.4	• Ensure all parents have access to culturally appropriate, universal child and family health services.	• Clearly define the interface between postnatal services (including Midwifery Group Practice models of care) and Child and Family Nursing Services including the Aboriginal Health Child and Family Nursing Service; • Develop a central clinical intake system for Child and Family Health Nursing Services at Tweed Community Health; • Improvement of trans-disciplinary practice for the provision of Child and Family Health Services to integrate service provision and maximise resources through the use of electronic media.	TBHSG Maternity and Newborn Services Governance Committee CNC Child and Family	Child and Family Nurses	
4.5	• Provide targeted health services for vulnerable families and actively connect them to additional support services.	• Conduct a review of SAFE START procedures including membership of committees, meeting processes, communication and follow up procedures; • Ensure all Midwives have completed on-line SAFE START Training through http://www.sfe.nswiop.nsw.edu.au/; • When available through HETI on-line as a mandatory requirement make available to all Midwives and other relevant staff and monitor compliance; • Identify opportunities for improved collaboration between services; • Investigate the potential to re-establish SAFE START meetings at the new Byron Central Hospital.	TBHSG Maternity and Newborn Services Governance Committee	Mental Health Services Government and NGO Agencies	• 100% of Midwives have received SAFE START training.

STRATEGIC DIRECTION 2: KEEPING CHILDREN AND YOUNG PEOPLE HEALTHY

OUTCOME: Improved vaccination rates for pregnant women and newborns

KEY PRIORITY 5: Improve screening health checks and immunisation rates

No.	Strategies	Actions	Responsibility	Partners	Outcome/Measure
5.1	• Drive participation and effectiveness of universal health screening and immunisation programs for all children.	• Ensure all Midwives are proactive in promoting immunisation: ○ All pregnant women are tested for HbSAg during their pregnancy; ○ All babies of Hepatitis B positive mothers are provided with Hepatitis B Immunoglobulin (HBIG) within 24 hours of birth; ○ All pregnant women are offered Diphtheria, Tetanus and Whooping Cough vaccination during their pregnancy; ○ Hepatitis B vaccination is administered to all infants at birth or within the first week of life; ○ All Midwives and Staff Specialists complete the HETI on-line immunisation training; ○ Liaise with NNSW LHD Public Health Unit to provide regular targeted training to staff on immunisation; ○ Identify opportunities for Nurses and Midwives to complete the NSW College of Nursing Immunisation Course; ○ Review the immunisation promotional material provided to ensure consistency across the Health Service Group; ○ Audit the provision of immunisation promotional material at booking in to identify any gaps.	CMC	MUMs Midwives GPs O&Gs Public Health Unit (PHU)	• 99% of women tested for HbSAg; • 100% babies of Hep B positive women are given HBIG within 24 hours of birth; • 100% completion of mandatory on-line immunisation training; • Immunisation promotional material reviewed and standardised across TBHSG; • Audit completed of provision of immunisation promotional material and 100% compliance.
5.2	• Promote use of the Personal Health Record (Blue Book in NSW, Red Book in Queensland).	• Promote the use of the Personal Health Record Book through all Birthing Services.	Midwives	Child and Family Nurses	• All women are offered the Personal Health Record Book.

STRATEGIC DIRECTION 3: ADDRESSING RISK AND HARM

OUTCOME: All Midwifery clinicians are trained in identification of domestic violence and women have access to services

KEY PRIORITY 6: Increase awareness of violence, abuse and neglect on health over time

No.	Strategies	Actions	Responsibility	Partners	Outcome/Measure
6.1	• Educate health professionals to recognise signs of violence, abuse and neglect.	• Collaborate with Education Centre Against Violence (ECAV) to provide Domestic and Family Violence Education to maternity staff across the LHD through specific courses such as Domestic Violence (DV) for NSW Health Workers, DV and Child Protection Training for Maternity and Child and Family Health Nurses, and Practical Skills in Responding to people who experience domestic and family violence; • Support staff to attend ECAV training sessions; • Ensure that all new staff receives DV training at core orientation.	Women's and Child Health Program and MUMs	Education Centre Against Violence	
6.2	• Conduct domestic violence routine screening in all antenatal services in accordance with *NSW Health Policy for Identifying and responding to domestic violence* (PD2006_084).	• Ensure that all staff who are mandated to conduct DV routine screening have undergone the 4 hour "Asking The Questions" training; • Sustain the pool of Domestic Violence Routine Screening (DVRS) trainers within maternity services across the LHD through the provision of ECAV train the trainer and refresher workshops; • Support trainers to develop their training package and provide training to all staff that are mandated to conduct DV routine screening; • Ensure that DVRS is conducted with all eligible women who attend antenatal services.	MUMs LHD Family Violence Officer and MUMs LHD Family Violence Officer MUMs		• All staff mandated to carry out routine screening have completed the 4 hour "Asking The Questions" ECAV training; • Each Maternity Unit has a core team of DVRS trainers; • Domestic violence routine screening is carried out for all eligible women attending antenatal services.

KEY PRIORITY 7: Improve identification and triage care for those at risk of harm

No.	Strategies	Actions	Responsibility	Partners	Outcome/Measure
7.1	• Reinforce the roles and responsibilities of health workers to screen, report and triage care for those at risk.	• Ensure all clinicians attend mandatory child protection training; • Explore a process to ensure accurate and timely exchange of information regarding birth alerts.	Managers CMC	Midwives Antenatal Clinic Coordinators ED Director	• 100% clinicians have attended child protection training.
7.2	• Embed a trauma-informed approach to assessing those who have been harmed or are at risk.	• Provide access to Trauma Informed Care to Maternity and Newborn Services staff; collaborate with Mental Health Services to provide training on trauma informed care.	Manager TBHSG Mental Health Services	MUMs Midwives CMC	• % participation in training for Trauma Informed Care Maternity and Newborn Services staff.
7.3	• Work with partner agencies to better care for those at risk of domestic and family violence, sexual assault or child abuse and neglect.	• Development of a better system of sharing information between Maternity Services and other health services such as Mental Health and Drug and Alcohol to Maternity and vice versa; • Development of a better system for sharing of information between Queensland Health Teams and NSW Health Teams; • Development of a cross border information sharing protocol as a pilot using "unborn child high risk birth alerts" as the type of information shared between NSW and Queensland services.	TBHSG Maternity and Newborn Services Governance Committee NNSW LHD Manager Child Protection	Mental Health Maternity and Newborn Services Community and Allied Health Services Cross Border Executive Committee	• System for sharing information developed, implemented and evaluated.

STRATEGIC DIRECTION 4: EARLY INTERVENTION

OUTCOME: Children who need additional support are indented and referred to the appropriate service provider to receive the additional support

KEY PRIORITY 8: Identify children who need extra support

No.	Strategies	Actions	Responsibility	Partners	Outcome/Measure
8.1	• Identify risk early in pregnancy/ parenthood and address factors that may impair parenting capacity or healthy development of child.	• Continue to consolidate the SAFE START model; • Develop a better system of sharing information between Maternity Services and other health services such as Drug and Alcohol to Maternity and vice versa; **Refer 7.3** • Consideration of electronic connectedness between Maternity Services and eMR systems of NNSW LHD. **Refer 12.2**	TBHSG Executive		• Refer 7.3.

KEY PRIORITY 9: Intervene early to prevent poor health, growth and development for children at risk

No.	Strategies	Actions	Responsibility	Partners	Outcome/Measure
9.1	• Engage earlier with parents with mental health and/or drug and alcohol issues to better support parent-child relationships.	• Provide education to Maternity Services on the scope of Mums Using Methadone and other substances (MUMS); • Develop standardised referral pathways from Maternity and Newborn Services to MUMS.	MUMS Program	Maternity and Newborn Services staff CMC	• Education program provided; • Referral pathways developed and implemented.

STRATEGIC DIRECTION 5: RIGHT CARE, RIGHT PLACE, RIGHT TIME

OUTCOME: All women and babies receive the right care in the right place at the right time

KEY PRIORITY 10: Deliver best-practice care as close to home as possible

No.	Strategies	Actions	Responsibility	Partners	Outcome/Measure
10.1	• Implement 'Service Capability Frameworks' to help create a networked health system which drives delivery of accessible, equitable and safe care as close to home as possible.	• Ensure that all current and future models of care and service delivery is consistent with NSW Kids and Families Capability Framework and NSW Guide to Role Delineation 2016; • Once the NSW Kids and Families capability check list is available develop a process to review current services against the standards; • Continue to develop referral and consultation pathways and processes for women who require a higher level of care; • Develop a clinical pathway for transfer and return of maternity and newborn patients requiring higher level care in tertiary hospitals in Queensland; • Promote mothers and babies staying together when transfer is provided. Nominate one person on the team responsible for communication; • Work with Gold Coast University Hospital to develop support for Queensland residents birthing at The Tweed Hospital and those being discharged from Queensland health services; • Develop admission and transfer policies and protocols to provide an appropriate level of care for women that present with a high BMI.	NNSW LHD Maternity Services Committee	TBHSG Maternity & Newborn Services Governance Committee	• Checklist completed, gaps identified and action plan developed; • Admission and transfer policies for women that present with a high BMI developed.
10.2	• Provision of evidence-based	• The Tweed Hospital Special Care Nursery: ○ Continued promotion of family centred care; ○ Promotion of a baby friendly environment;	NUM Special Care Nursery	Paediatricians Allied Health staff	

No.	Strategies	Actions	Responsibility	Partners	Outcome/Measure
	care for infants and newborns.	○ Improved case management for families with infants with more complex needs; ○ Development and promotion of standardised care guidelines and clinical pathways (e.g. Tube weaning protocols) within the Special Care Nursery; ○ As part of a redevelopment of The Tweed Hospital, planning for redevelopment of the Special Care Nursery to include: – Increased capacity and improved functionality within the Unit; – Increased capacity to include surge capacity; – Improved sensory environment – particularly with regard to making the Special Care Nursery more baby friendly with regard to noise and light; – Access to a designated breastfeeding/expressing room within the Women's Care Unit; – Facilitate and encourage parent's ability to participate in care including overnight stays in the Special Care Nursery; provision of a rooming-in facility within the Special Care Nursery in line with Health Facility Guidelines; – Inclusion of overnight beds for mothers whose babies are being discharged home from the Special Care Nursery.	Allied Health staff TBHSG Executive	Consumers Paediatricians NUM Special Care Nursery	• Guidelines developed and implemented; • Included in service planning.
10.3	• Develop evidence-based standards of practice to improve consistency of care and reduce unwarranted clinical variation.	• Improve the provision of Physiotherapy services to the Women's Care Unit at The Tweed Hospital; • Develop and implement evidence based referral protocols.	Physiotherapy	MUM Women's Care Unit Midwives	• Evidence based referral protocols developed.
10.4	• Progress inclusive and innovative care to close the gap in	• Accurately identify all women having an Aboriginal baby;	All staff TBHSG Maternity and Newborn Services	Bugalwena	• ≥ 99% of all women having an Aboriginal baby

No.	Strategies	Actions	Responsibility	Partners	Outcome/Measure
	health outcomes for Aboriginal and rural families.	• Collaborate with Bugalwena General Practice to ensure Aboriginal families are offered appropriate services for their care; • Identify funding opportunities to establish an AMIHS in the Tweed Byron Health Service Group. **Refer: 2.5**	Governance Committee		identified at booking in.

KEY PRIORITY 11: Provide safe, high-quality and effective healthcare

No.	Strategies	Actions	Responsibility	Partners	Outcome/Measure
11.1	• Support health providers to meet or exceed National Safety and Quality Health Service Standards.	• Conduct a gap analysis in relation to implementation of National Standards; • Identify key priority areas for service development to ensure compliance with standards.	CMC	TBHSG Maternity and Newborn Services staff	• Gap analysis conducted and key priorities identified.
11.2	• Collaborate on clinical redesign strategies to improve the quality, safety and effectiveness of healthcare.	• Identify areas for improvement and adopt ACI and/or Clinical Excellence Commission tools and strategies to further develop and implement improved services and models.	CMC	TBHSG Maternity and Newborn Services staff	
11.3	• Establish systems to provide expert advice to health practitioners and facilitate escalation of care.	• Collaborate with the Cognitive Institute to provide graded assertiveness facilitator training within the Tweed Byron Health Service Group; • Facilitate the training of all midwives in graded assertiveness; • Implement the recommendations of morbidity and mortality reviews and formal clinical reviews to all services.	CMC TBHSG Executive	TBHSG Maternity and Newborn Services staff	• 75% Midwives completed graded assertiveness training; • 100% of recommendations implemented.

KEY PRIORITY 12: Deliver integrated, connected healthcare

No.	Strategies	Actions	Responsibility	Partners	Outcome/Measure
12.1	• Coordinate integrated Maternity and Newborn Services across the Health Service Group to improve access and efficiency and reduce duplication.	• Implement the unique patient identifier (Medical Record Number) in line with the implementation of eMR; • Develop an integrated service delivery model for Maternity and Newborn Services across the Tweed Byron Health Service Group: ○ Establish a governance committee which includes representation from the full range of maternity and newborn services and consumers (in line with National Quality Standard 2) across the Health Service Group to collaboratively develop an annual work plan which actions and allocates responsibilities to facilitate implementation of the Tweed Byron Maternity and Newborn Services Plan; ○ Governance Committee to meet regularly to monitor implementation of the Work Plan; ○ Consider the need for a central governance model with the Midwifery Group Practices managed under the one Midwifery Unit Manager; • Consolidate the work of the Maternity - Towards Normal Birth Working Party to ensure delivery of key measures and align with the governance committee.	TBHSG Executive CMC	TBHSG Maternity and Newborn Services staff O&Gs CMC Parenting Educators CNC Child and Family CNC Diabetes Allied Health staff Maternity - Towards Normal Birth Working Party	• Unique patient identifier-single MRN implemented across TBHSG; • TBHSG Governance Committee established; • Terms of Reference developed and endorsed by Executive.
12.2	• Better connect care across the continuum of maternal and early child health services.	• Develop consistent referral processes which enhance collaboration between Maternity Services, Early Discharge, Child and Family Health Nursing and Allied Health Services to improve a client's journey and transition between the two services; • Review the interface between Child and Family Nursing, Women's Care Units and Early Discharge Program to ensure service gaps are identified and addressed;	TBHSG Maternity and Newborn Services Governance Committee	Maternity and Newborn Services staff, Community and Allied Health staff, Mental Health and Drug and Alcohol Services, Child	• Communication systems reviewed and improvements implemented; • Referral process reviewed and further developed.

No.	Strategies	Actions	Responsibility	Partners	Outcome/Measure
		• Establish mechanisms for all health workers to communicate effectively to support greater integration of Maternity and Newborn Services; • With the implementation of eMaternity consider access to a wider range of clinicians outside the hospitals setting; • Provide the capacity for Midwives' access to electronic systems including ObstetriX or its replacement, scheduling, power chart to enable them to provide community based midwifery care; • Development of ICT infrastructure to support clinical service delivery through fixed and mobile end user devices, access to WiFi across inpatient areas and a suite of clinical software tools that support and further progress the eMR; • Further development of Telehealth facilities and models of care across the Health Service Group.		Protection and NCPHN	
12.3	• Bring together and enhance services to encompass the physical and mental health needs of parents, children and young people.	• Provision of Support Groups in line with evidence based practice guidelines for vulnerable groups to respond to the special needs of women and families where women have specific needs e.g. history of sexual assault and trauma around delivery.	Social Work Department	Maternity and Newborn Services staff, Mental Health and Drug and Alcohol Services, Child Protection and Aboriginal Health	• Gap analysis completed of current services; • Parent support groups provided as identified.

KEY PRIORITY 13: Provide inclusive, family-centred, culturally respectful and age-appropriate care

No.	Strategies	Actions	Responsibility	Partners	Outcome/Measure
13.1	• Customise care to be culturally inclusive, age-appropriate and responsive to diversity.	• Incorporate consultation with Aboriginal community leaders /members into planning service developments of importance to their communities; • Identify funding opportunities to establish an AMIHS in the Tweed Byron Health Service Group. **Refer: 2.5**	TBHSG Executive		• Consultation undertaken.
13.2	• Incorporate the experiences of new parents, children, young people and their families in the design and delivery of child and family-centred practice.	• Include capacity for feedback from consumers in development of a Health Service Group wide Maternity and Newborn Services web site; • Review feedback and use to inform service development.	TBHSG Maternity and Newborn Services Governance Committee	Consumers	• Capacity for feedback from consumers included in Maternity and Newborn Services web site.

STRATEGIC DIRECTION 6: PROVIDE A SKILLED AND MOTIVATED WORKFORCE

OUTCOME: The Maternity and Newborn Service workforce is sustained and supported through appropriate education and training programs to meet the needs of consumers.

KEY PRIORITY 14: Workforce Development

No.	Strategies	Actions	Responsibility	Partners	Outcome/Measure
14.1	• Workforce planning across the full range of professions for Maternity and Newborn Services.	• Develop a Workforce Plan which includes: ○ Provision of additional support and supervision of Junior Medical Staff; ○ An increase in the number of GPs and Staff Specialists in Obstetrics and Gynaecology; ○ Succession planning for GP VMO (Obstetrics) to ensure the level of GP VMO (Obstetrics) cover is maintained; ○ Development of strategies to ensure sufficient midwives to meet increasing demand and to work in the Midwifery Group Practice model to ensure sustainability of the model of care; ○ Development of a pathway for new graduate Direct Entry Midwives to enter Midwifery Group Practice through planning to build a new graduate positon into the Midwifery Group Practice workforce; ○ Staffing model to meet current and future demand for Diabetes Services including: – A specialist Diabetes Educator for the Health Service Group for pregnant women with Diabetes Types 1 and 2 and GDM; – An additional Staff Specialist Endocrinologist; ○ Recognition of the importance of Allied Health staff as valued team members and planning for development of a specialised Allied Health workforce model to support maternity and newborn care at The Tweed Hospital including:	TBHSG Executive	NNSW LHD Workforce Change and Sustainability Service EDN&M GCHHS Medical Specialists Manager Community and Allied Health	• Workforce Plan developed detailing key result areas.

No.	Strategies	Actions	Responsibility	Partners	Outcome/Measure
		– Special Care Nursery - Paediatric Occupational Therapy; – Antenatal Care and Postnatal Care - Physiotherapy; – Newborns - Paediatric Speech Pathology; – Families at risk - Social Work; • Consideration of the need for support to Allied Health staff in supervising allied health students to become competent in provision of maternity and newborn services.			
14.2	• Further Develop Education and Training in line with service development and changing models of care.	• As part of an LHD wide strategy develop formal training for all health care staff in the skills necessary to implement *Maternity – Towards Normal Birth in NSW*; **Refer: 3.5** • Develop an annual breastfeeding education program for all midwives which is facilitated by Tweed Byron Health Service Group Midwives with lactation consultant qualifications; • Plan for an increase in Clinical Educators in Maternity across the Health Service Group; • Consider provision of a dedicated Neonatal Nurse Education position; • Continue to attract undergraduate and post graduate student midwives in partnership with education institutions; • Provide improved support to undergraduate and post graduate student midwives, medical students and registrars to ensure they have the necessary level of experience to become competent; • Provide opportunities at level 6 tertiary services for medical and midwifery staff as an essential component of training, education and skills enhancement; • Expand the use of Telehealth and videoconferencing in the provision of staff training; • Increase clinical midwifery education on-site at Byron Central and Murwillumbah District Hospitals to provide increased support to the Midwifery Group Practice;	CMC CMC TBHSG Executive	Maternity and Newborn Services staff	• Formal training developed and implemented with 100% attendance; • Annual breast feeding education program developed and implemented; • Planning undertaken as part of operational planning and budgeting.

No.	Strategies	Actions	Responsibility	Partners	Outcome/Measure
		• Train all health care staff in skills necessary to implement PD2011_042, Breastfeeding in NSW - Promotion, Protection, and Support.			
14.3	• Clinical Supervision.	• Provision of clinical supervision to all midwives involved in antenatal care to reduce the risk of vicarious trauma; • Provision of clinical supervision for all midwives who recognise their need to "'safely' *discuss, reflect upon and explore a clinical experience*".	• Line Manager to facilitate access to clinical supervision; • Appropriately trained clinical supervisor available to provide the clinical supervisor sessions.		

APPENDIX 1: ACRONYMS

ABF	Activity Based Funding
ABS	Australian Bureau of Statistics
ACHS	Australian Council on Healthcare Standards
ACI	Agency for Clinical Innovation
ACM	Australian College of Midwives
ADA	Australian Diabetic Association
ADS	Australian Diabetic Society
aIM	Acute Inpatient Modelling Tool
ALOS	Average Length of Stay
AMIHS	Aboriginal Maternal and Infant Health Service
AMRS	Aeromedical and Medical Retrieval Services
AMS	Aboriginal Medical Service
ATAPS	Access to Allied Psychological Services
BGL	Blood Glucose Level
BMI	Body Mass Index
BP	Blood Pressure
BUDSET	Birth Unit Design Spatial Evaluation Tool
CCU	Coronary Care Unit
CEC	Clinical Excellence Commission
CERS	Clinical Emergency Response System
CFHN	Child & Family Health Nurse
CHOC	Community Health and Outpatient Care
CIN	Clinical Initiatives Nurse
CM	Certified Midwife
CMC	Clinical Midwifery Consultant
CMO	Career Medical Officer
CNC	Clinical Nurse Consultant
CNE	Clinical Nurse Educator
CNS	Clinical Nurse Specialist
CT	Computerised Tomography (CT scan)
CTG	Cardiotography monitoring
DON	Director of Nursing
DRG	Diagnostic Related Group
DVRS	Domestic Violence Routine Screening
ECAV	Education Centre Against Violence
ECV	External Cephalic Version
ED	Emergency Department
EDS	Edinburgh Depression Scale
EDT	Estimated Driving Time
eMR	Electronic Medical Record
EN	Enrolled Nurse
ENT	Ear, Nose & Throat
ESRG	Enhanced Service Related Groups
FTE	Full Time Equivalent
GCHHS	Gold Coast Hospital and Health Service
GCUH	Gold Coast University Hospital
GDM	Gestational Diabetes Mellitus

HDU	High Dependency Unit
HETI	Health Education and Training Institute
ICT	Information Communication and Technology
ICU	Intensive Care Unit
IPTAAS	Isolated Patients Travel, Accommodations and Assistance Scheme
IT	Information Technology
JIRT	Joint Investigation Response Team
JMO	Junior Medical Officer
KPI	Key Performance Indicator
LGA	Local Government Area
LHD	Local Health District
MDH	Murwillumbah District Hospital
MGP	Midwifery Group Practice
MNC LHD	Mid North Coast Local Health District
MO	Medical Officer
MOU	Memorandum Of Understanding
MUM	Maternity Unit Manager
MuMS	Mothers Using Methadone and other substances program
NAPS	Non-Admitted Patient Services
NDIS	National Disability Insurance Scheme
NEHRT	Non-Emergency Health Related Transport
NETS	Newborn Emergency Transport Service
NGO	Non-Government Organisation
NICU	Neonatal Intensive Care Unit
NNSW LHD	Northern NSW Local Health District
NSW	New South Wales
NUM	Nurse Unit Manager
O&G	Obstetrics and Gynaecology
PCEHR	Person Controlled Electronic Health Record
PFH	Publicly Funded Homebirth
PND	Postnatal Depression
PPEM	Privately Practising Eligible Midwife
QCC	Queensland Coordination Centre
QRS	Queensland Retrieval Service
RMO	Registered Medical Officer
RN	Registered Nurse
SCN	Special Care Nursery
SEIFA	Socio-Economic Indexes for Areas
Seps	Separations
SLA	Statistical Local Area
SRG	Service Related Group
SWISH	State Wide Infant Screening - Hearing
TBHSG	Tweed Byron Health Service Group
TOR	Terms of Reference
TTH	The Tweed Hospital
VBAC	Vaginal Birth After Caesarean
VMO	Visiting Medical Officer
WHO	World Health Organisation
YTD	Year to Date

APPENDIX 2: REFERENCES

Relevant Plans, Policy Directives and Guidelines:

- PD 2005_161 Maternity Emergencies;
- PD 2006_045 Public Home Birth Services;
- PD 2007_025 Stillbirth – Management and Investigation;
- PD 2008_027 Clinical Care and Resuscitation of the Newborn Infant;
- PD2010_016 SAFE START Strategic Policy;
- PD 2010_017 Maternal and Child Health Primary Health Care Policy;
- PD 2010_022 National Midwifery Guidelines for Consultation and Referral;
- PD 2010_069 Critical Care Tertiary Referral Networks (Perinatal);
- PD 2011_042 Breastfeeding in NSW: Promotion, Protection and Support;
- PD2010_045 - *"Maternity-Towards Normal Birth in NSW;*
- PD2015_003 NSW Health Smoke-free Health Care Policy;
- GL2009_015 Influenza Guidelines for Maternity Services;
- GL2013_008 Neonatal Abstinence Syndrome Guidelines;
- GL 2014_004 Supporting Women in their Next Birth After Caesarean Section;
- GL2014_022 Guidelines for the Management of Substance Use During Pregnancy Birth and the Postnatal Period;
- GL2015_014 Provision of Private Midwifery Services by Eligible Midwives in NSW Public Hospitals;
- NSW Health Guide to Role Delineation of Clinical Services 2016;
- Baby Friendly Health Initiative (to protect, support and promote breast feeding);
- National Maternity Services Plan 2010;
- NNSW LHD Clinical Procedure – Managing Nicotine Dependence;
- NSW Health Policy and Procedures for Identifying and Responding to Domestic Violence;
- NSW Kids and Families Having a Baby;
- Improving Maternity Services in Australia – The Report of the Maternity Services Review;
- NSW Health Midwifery Continuity of Care Model Took-kit;
- NSW Health Quit for new life handbook.

APPENDIX 3: TERMS OF REFERENCE

Tweed Byron Health Service Group Maternity and Newborn Services Plan
Steering Committee

Terms of Reference

Purpose:
The purpose of the Steering Committee is to oversee the development of the Tweed Byron Health Service Group Maternity and Newborn Services Plan.

The Steering Committee will be responsible for:

- Ensuring that the Tweed Byron Health Service Group Maternity and Newborn Services Plan is developed using appropriate consultation and meets the needs of the community now and into the future;
- Ensuring the Tweed Byron Health Service Group Maternity and Newborn Services Plan is consistent with NSW Health and Northern NSW Local Health District (NNSW LHD) plans and policies;
- Ensuring the Tweed Byron Health Service Group Maternity and Newborn Services Plan incorporates service utilisation, projections and a flow reversal scenario which reflects the changing service environment of the Tweed Byron Health Service Group to 2027;
- Ensuring the Tweed Byron Health Service Group Maternity and Newborn Services Plan incorporates the service direction detailed in the NNSW LHD Health Care Services Plan 2013-2018 and Asset Strategic Plan;
- Ensuring the Tweed Byron Health Service Group Maternity and Newborn Services Plan aligns with the service direction detailed in NSW Kids and Families "Healthy Safe and Well" a Strategic Plan for Children, Young People and Families 2014-24;
- Ensuring the Tweed Byron Health Service Group Maternity and Newborn Services Plan is consistent with all relevant Policy Directives including but not limited to PD2010_045 "*Maternity-Towards Normal Birth in NSW";*
- Overseeing the prioritisation process for a staged model of care development;
- Making recommendations within the Tweed Byron Health Service Group Maternity and Newborn Services Plan;
- Communication with stakeholders;
- Manage unforeseen key issues that arise during the life of the Steering Committee;
- Signing off on the final draft Tweed Byron Health Service Group Maternity and Newborn Services Plan prior to its endorsement by the NNSW LHD Executive and Board.

Chairperson:
Ms Bernadette Loughnane, Executive Director Tweed Byron Health Service Group or delegate

Membership:

Position
Chief Executive NNSW LHD
Executive Director Nursing and Midwifery
Director of Nursing The Tweed Hospital (TTH)
Director of Medical Services Tweed Byron Health Service Group
Network Director Obstetrics and Gynaecology
Staff Specialist Obstetrics and Gynaecology
Maternity Unit Manager Murwillumbah District Hospital
Maternity Unit Manager TTH
NUM Special Care Nursery TTH
NNSW LHD Clinical Midwifery Consultant
Executive Officer Director of Nursing (EO DON) Mullumbimby and District War Memorial Hospital
Community representatives (2)
Network Director Paediatrics and Neonates-(also Medical Staff Council Representative)
General Practitioner VMO
Executive Director, Strategy and Health Service Planning, GCHHS (Cross Border Representative)
Director, Strategy and Health Service Planning, GCHHS (Cross Border Representative)
ADON SPOGA TTH
Strategic Development and Performance Coordinator – Aboriginal Health Strategic Unit
Manager Tweed Allied Health and Hospital Alternatives
Manager Planning and Performance

Other members may be co-opted as required including representation from:

- Midwifery Group Practice;
- Anaesthetists;
- Mental Health and Drug and Alcohol Services;
- Endocrinology;
- Network Director ED;
- Operating Theatres;
- NSW Ambulance.

Secretariat:

Planning and Performance Unit NNSW LHD

Contact:

Ms Maureen Lane, Manager, Planning and Performance NNSW LHD

Steering Committee Members will be responsible for:

- Attending meetings and consultations (as required) or sending alternate delegate;
- Participating in discussion to develop the Maternity and Newborn Services Plan;
- Assisting to fulfil the responsibilities of the Steering Committee as per the Steering Committee responsibilities noted in this Terms of Reference.

Consultation:
Consultation will be required to ensure effective stakeholder participation in service priorities and strategy development.

Quorum:

- 50% plus one person (six plus one). Members are required to nominate an alternative delegate if unable to attend. Minimum one Medical Officer in attendance.

Meetings:
It is envisaged that the Steering Committee will meet at least three times during the process. The purpose of each meeting is as follows:

Number	Date	Purpose
1	9 February 2016 2.00pm-4.00pm	First Steering Committee meeting to endorse Terms of Reference, Scope and Plan template plus Consultation Schedule.
2	21 March 2016 2.00pm-4.00pm	Steering Committee meeting to review reports, review findings from consultation workshops and review first draft Tweed Byron Health Service Group Maternity and Newborn Services Plan.
3	27 April 2016 10.00am-12.00md	Steering Committee meeting to review findings from consultation workshops and review draft Tweed Byron Health Service Group Maternity and Newborn Services Plan and endorse for circulation to key stakeholders.
4	23 May 2016 2.00pm-4.00pm	Steering Committee meeting to review feedback from key stakeholders and endorse Tweed Byron Health Service Group Maternity and Newborn Services Plan.

- **Venue:** The Tweed Hospital Board Room, Fourth Floor Administration Building;
- **Teleconferencing:** Use of teleconferencing when necessary, details for teleconferencing will be included on the agenda for each meeting;
- Agendas and attachments will be emailed one week prior to the meeting and is the responsibility of the Planning and Performance Unit;
- Action Sheets will be emailed to all members one week after the meeting;
- Minutes will be emailed to all members and is the responsibility of the Planning and Performance Unit;
- Extra-ordinary meetings will be held as agreed by the Steering Committee.

APPENDIX 4: ABORIGINAL HEALTH IMPACT STATEMENT

Health
Northern NSW
Local Health District

Aboriginal Health Impact Statement Declaration

This Statement and the following Checklist will accompany new initiatives submitted for approval to the Northern NSW Local Health District (NNSW LHD) Executive Meeting and/or the relevant committees at a network/local level. This Statement and Checklist aims to ensure that the health needs and interests of Aboriginal people have been considered, and where relevant, appropriately incorporated into health policies. Note that as well as health policies and policy initiatives, this Statement should be used in relation to major health strategies and programs.

THE ABORIGINAL HEALTH IMPACT STATEMENT DECLARATION

Title of the policy/ initiative: Tweed Byron Health Service Group Maternity and Newborn Services Plan 2016-2026

Please complete the Declaration below and the **Checklist if required.**

Please tick relevant boxes:

- ✓ The health* needs and interests of Aboriginal people have been considered, and appropriately addressed in the development of this initiative.
- ✓ Appropriate engagement and collaboration with Aboriginal people has occurred in the development and implementation of this initiative.
- ✓ Completed Checklist attached.

OR

- ☐ The health* needs and interests of Aboriginal people have been considered, in the development of this initiative.
- ☐ The Aboriginal Health Impact Statement Checklist does not require completion because there is no direct or indirect impact on Aboriginal people. (Please provide explanation).

The Tweed Valley Maternity and Newborn Services planning process included Input from the Aboriginal community including an Aboriginal Community representative on the Steering Committee and specific consultation sessions held with Aboriginal Health staff. A number of recommendations relate to improved service provision to Aboriginal people living in the Tweed Byron Health Service Group.

Manager of the Unit: Maureen Lane

Unit Name: Planning and Performance Unit

Local Health District or other body: Northern NSW Local Health District

Signature: Date: 17 May 2016

Contact phone no: 02 6620 2897 Email address: Maureen.Lane@ncahs.health.nsw.gov.au

Registration no: TBHSG/2016/01 on Wednesday 20 April 2016

Date: Manager Aboriginal Health Signature: SD&PC Signature:

* For Aboriginal people, health is defined as not just the physical well-being of the individual but the social, emotional and cultural well-being of the whole community.

Aboriginal Health Impact Statement Checklist

This Checklist should be used when preparing an Aboriginal Health Impact Statement for new health policies, as well as major health strategies and programs. To complete the checklist and to fully understand the meaning of each checklist item, it is essential to refer to *How to Use the checklist* in Part 3 of the Aboriginal Health Impact Statement.

Development of the policy, program or strategy

1. Has there been appropriate representation of Aboriginal stakeholders in the development of the policy, program or strategy? ✓ Yes ○ No

2. Have Aboriginal stakeholders been involved from the early stages of policy, program or strategy development? ✓ Yes ○ No

Please provide a brief description

The Steering Committee included Aboriginal representation and Aboriginal Health Program staff were consulted. The Plan was made available on the Intranet for comment and the Aboriginal Health Program Manager and staff advised and provided with an opportunity to comment.

3. Have consultation/negotiation processes occurred with Aboriginal stakeholders? ✓ Yes ○ No ○ N/A

4. Have these processes been effective? ✓ Yes ○ No

Explain

Yes a number of recommendations relate to development of specific services to Aboriginal people.

5. Have links been made with relevant existing mainstream and/or Aboriginal-specific policies, programs and/or strategies? ✓ Yes ○ No ○ N/A

6. How does the initiative meet the objectives of the NNSW LHD Aboriginal Workforce Development Strategy?

Explain

Recommendations in include development for a Training Plan for all staff.

Contents of the policy, program or strategy

7. Does the policy, program or strategy clearly identify the effects it will have on Aboriginal health outcomes and health services? ✓ Yes O No

Comments

The Plan includes recommendations which seek to improve health outcomes for Aboriginal women and Aboriginal babies.

Yes

8. Have these effects been adequately addressed in the policy, program or strategy?

Explain

Targets which directly impact on improved health outcomes have been included e.g. % Aboriginal women smoking during pregnancy and % Aboriginal women accessing antenatal care ≤14 week's gestation.

9. Are the identified effects on Aboriginal health outcomes and health services sufficient for Aboriginal people (compared to the general population) to warrant the development of a separate policy, program or strategy? ✓ Yes O No O N/A

Explain

The North Coast Integrated Aboriginal Health and Wellbeing Plan has been developed and is being implemented.

Implementation and evaluation of the policy, program or strategy

10. Will implementation of the policy, program or strategy be supported by an adequate allocation of resources specifically for its Aboriginal health aspects? ✓ Yes O No O N/A

This will be included in business planning and specific funding will be sought to provide a specialist Aboriginal Maternal and Infant Health Service in the Tweed Byron Health Service Group.

11. Will the initiative build the capacity of Aboriginal people/organisations through participation? ✓ Yes O No O N/A

In what way will capacity be built?

Recommendations relate to improved collaboration with Bugalwena Advisory Committee and seeking funding for specific Aboriginal Maternal and Infant Health Service provision.

12. Will the policy, program or strategy be implemented in partnership with Aboriginal stakeholders? ✓ Yes O No O N/A

Briefly describe the intended implementation process

There will be collaboration with Bugalwena Advisory Committee.

13. Does an evaluation plan exist for this policy, program or strategy? ✓ Yes O No O N/A

14. Has it been developed in conjunction with Aboriginal stakeholders? ✓ Yes O No O N/A

Explain