Services for Children and Young People

Specialist Neonatal Inpatient and Home Care Services

Tier 2 Service Specification

September 2024

Health New Zealand
Te Whatu Ora

Contents

1. Status

Approved to be used for mandatory nationwide description of services to be provided.

MANDATORY ☑ RECOMMENDED ☒

It is compulsory to use this Specification when purchasing services. No Districts should use a local service specification instead of this mandatory specification.

2. Review History

Review History	Date
Approved by Nationwide Service Framework Coordinating Group (NCG)	February 2011
Published on NSFL	February 2011
Review: Specialist Neonatal Inpatient and Home Care Service Specification (2004) Amendments: inserted Contents page, Service Definition redefined, Service Objectives clarified. Reformatted Purchase Unit Table.	December 2010
Moved to Health NZ template. Updated links for PUDD and NSFL only. Amended DHB to become District/Region where appropriate. No other changes to content made.	September 2024
Consideration for next Service Specification Review	Within five years

Note: In September 2024 a small programme of work moved all Service Specifications to Health New Zealand branded templates. No amendments were made to the body text or content of the Service Specification, so references to DHB, Ministry of Health or other pre-2022 reforms vocabulary will still exist. A larger programme of work to review and revise all Service Specifications is planned for late 2024 to early 2025.

Note: Contact the NSF Team, Te Whatu Ora | Health New Zealand to discuss proposed amendments to the service specifications and guidance in developing new or updating and revising existing service specifications. NSF@tewhatuora.govt.nz

Nationwide Service Framework Library web site here

3. Introduction

This tier two service specification for Specialist Neonatal Inpatient and Home Care Services (the Service) must be used in conjunction with the tier one Services for Children and Young People service specification and is linked to the following service specifications:

- tier one Specialist Medical and Surgical Services
- Maternity Services suite.

Refer to the individual overarching documents for generic details on:

- Service Objectives
- Service Users
- Access
- Service Components
- Exclusions
- Quality Requirements.

4. Service Definition

This service specification applies to secondary and tertiary inpatient specialist neonatal services, and neonatal home care services that are purchased from Districts.

Specialist components of this Service may include:

- diagnosis and management of surgical or medical neonatal conditions
- support for management of chronic respiratory conditions, congenital anomalies and terminal care, infants with feeding / complex needs, apnoea monitoring
- preparation for management of the neonate / newborn in the community
- transportation / retrievals of neonatal infants.

Neonates who require specialist neonatal care are those babies who:

- are preterm <37 weeks
- were term (from 37 weeks) and presented with a neonatal condition in the first month of life.

Specialist neonatal care is required for those babies requiring:

- specialist medical care for perinatal events including syndromic conditions prematurity, perinatal infections and asphyxial insults or have congenital abnormalities
- significant neonatal surgery
- short or long term ventilation including continuous positive airway pressure (CPAP)
- Total Parenteral Nutrition (TPN)
- treatment for neonatal substance withdrawal
- palliative care
- failure to thrive due to in utero placental insufficiency.

5. Service objectives

The objectives of the Service are to:

- support the continuum of care
- provide a patient centred approach that works with the families of neonate / newborn / infant
- reduce the impact of further hospital admissions
- enhance normal growth and development of the infant.

5.1 Māori Health

Refer to the tier one Services for Children and Young People service specification.

6. Service Users

The Service user is any eligible[1] neonate / newborn that requires specialist neonatal services and any eligible infant who has received inpatient specialist neonatal services and requires follow up in the community.

7. Access

The person responsible for a woman's maternity care Lead Maternity Carer (LMC) or specialist obstetrician) is also responsible for ensuring access to specialist care for neonates, if it is needed.

Access may be arranged by referral to the Service prior to labour, during labour, at birth or in the postnatal period.

Referrals will be accepted from:

- other District neonatal services
- LMC
- Midwives, Well Child providers in the community; General Practitioners and Specialist Obstetricians who are not LMC where the woman / infant requires immediate access to:
  - a Secondary /Tertiary Maternity Service
  - a Maternity Facility for women who have no LMC
  - an Emergency Department
- ambulance services.

[1] Not all children who are referred or present to the Service are eligible for publicly funded services. Refer to website: http://www.moh.govt.nz/eligibility for more eligibility information.

8. Service Components

8.1 Process

The management of the infant by the Service involves a complex sequence of relationships and events. The level of intervention will depend on the condition of the neonate / newborn; their parents or caregivers consent for treatment, the qualifications / training and experience of the clinical staff and the level of clinical support available.

The Services provided includes the following components:

The Inpatient Service been defined in three levels as described below in sections 8.2: to 8.5 inclusive.

8.2 Inpatient Neonatal Services Included for Level One

The following are the type and level of services required:

- provision of care for babies with minimal complications and greater than 35 weeks gestation (ie, 36 weeks 0 days) 24 hour / day, seven days / week
- consultative services to LMCs; assessment and treatment of the newborn
- counselling services for parents of sick infants or parent of infants who have died
- respiratory monitoring; Intra Venous (IV) fluid therapy; tube feeds and phototherapy
- personnel:
  - medical practitioners with paediatric experience on 24 hour call
  - medical officer on-site or readily available
  - some Registered Nurses with neonatal or paediatric experience, and / or undertaking relevant post-registration studies
- pharmacy:
  - part or full time pharmacist on staff
  - pharmacy controlled drug distribution to patients
  - service includes drug information, monitoring and utilisation review, adverse drug reporting
- diagnostic imaging with regular access to a Radiologist consultation
- pathology: urgent tests including blood gas analysis available; infection control records kept and monitored. Cross-matched blood available within one hour and blood storage facilities on-site
- allied health services eg, physiotherapy, dietetics, social work
- interpreter services
- formal link with higher level units established through relationships and protocols
- Neonatal Life Support courses for all staff.

8.3 Inpatient Specialist Neonatal Services Included for Level Two

The following types and level of services are required in addition to those required at level one:

- provision of care for babies with moderate complications with gestation of 32 weeks or above
- where appropriate, provision of resuscitation and stabilisation prior to transfer; short term ventilation, including CPAP for an estimated maximum of 48 hours; insertion and care of umbilical lines and short term TPN (where available)
- personnel:
  - Specialist Paediatrician: paediatricians are on 24-hour call
  - Nursing: at least one Registered Nurse with neonatal experience per shift. There should be at least one Registered Nurse per unit that has more than five years neonatal nursing experience
  - Pharmacy: more than one full time pharmacist and support staff on staff. Pharmacist on-call for emergency advice. May have limited sterile and non-sterile manufacturing service, which complies with the Compounding of Sterile Pharmaceutical Products (1995)[2].
  - Diagnostic imaging: x-ray, fluoroscopy, ultrasound and / or CT capacity. Medical Radiation technologist and Radiologist on call 24 hours.
  - Pathology: basic pathology service on-site, blood bank with on-site cross matching. Locally managed with formal link with large laboratory 24 hour on call service
- access to accommodation for mothers whose babies are under care at a distance from the normal domicile of the family or as specified in the National Travel Assistance Scheme
- formal link with higher level neonatal units established through relationships and protocols.

8.4 Inpatient Specialist Neonatal Services Included for - Level Two Plus

These Specialist units are required where there are regional and geographical requirements to meet the needs of the newborn population and should be linked to the regional level three neonatal services provider.

The following types and level of services are required in addition to those required at level two:

- provision of care for infants with moderate to severe complications, including infants with gestation of 28 weeks or above. Consultation with a tertiary unit is required to manage complex infants
- inclusion of a consultative service to lower level neonatal services and a neonate retrieval service to appropriate level of neonatal services

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[2] Part III , Annex 1 of the NZ Code of Good Manufacturing Practice for Manufacture and Distribution of Therapeutic Goods. http:medsafe.govt.nz/Regulatory/Guideline/code.asp

- provision of TPN
- provision of resuscitation and stabilisation prior to transfer; short term ventilation for an estimated maximum of 48 hours
- personnel:
  - Paediatricians with appropriate neonatal training including those with a special interest in neonatology
  - Paediatric Registrar on-site or neonatal nurse specialists / Nurse Practitioners. The link with level three units may include rotation of physicians / neonatologists
  - Pharmacy: provides drug information service and bulletins; participates in ward rounds. A clinical pharmacy service and outpatient service. Sterile intravenous (IV) admixture service. Clinical trial support for research activities in hospital
  - Diagnostic Imaging Department; Radiologist in charge; 24 hour on-site service; may have a Radiology Registrar, full ultrasound, capacity; MRI availability in consultation with a Paediatric radiologist or Neuroradiology specialist
  - Pathology: full department; 24-hour on-site service; full time medical director and more than one pathologist.
- provision of long-term follow-up service and results reported
- Includes formal linkages with higher level units established through relationships and protocols.

8.5 Inpatient Specialist Neonatal Services Included for Level Three

The following types and level of services are required in addition to those required at level two plus:

- provision of all aspects of neonatal care including:
- intensive care including TPN for the critically ill infant or an infant requiring significant neonatal surgery
- inclusion of a consultative service to lower level neonatal services and a retrieval service to a higher level if required (see 8.6).
- provision of all forms of ventilation including
  - CPAP
  - conventional ventilation
  - high frequency ventilation and
  - nitric oxide support
- personnel:
  - Specialists: medical director; neonatal paediatricians on 24 hour call; medical officers
  - Neonatal Nurse Practitioners or Clinical Nurse Specialists (advanced neonatal practice nurses (ANP)) on site; neonatal intensive care trained Registered Nurses
  - access to clinical diagnostic paediatric sub-specialists
- formal link with lower level units established through relationships and protocols
  - provision of District regional leadership in neonatal care including educational programmes for staff in the region and research.

8.6 The Transfers and Retrievals for Specialist Neonatal Services

- Neonatal services are responsible for ensuring that neonates are cared for at a level of intensity appropriate to their level of need. This will include referring from a lower level unit to a higher level unit as clinically required and transferring from a higher level unit to lower level unit as appropriate to aid access for parents and families and whānau.
- Retrieval: when a neonate is transferred to a level three provider and the skills of that provider are needed prior to, or during, transportation, the level three provider shall provide retrieval services (in line with National Transport arrangements). These costs are met by the District of domicile.
- Transfer of care shall be documented and the parent(s) / caregivers shall always be aware of the identity of the responsible clinicians. When emergency transfers are made, parental notification shall be made as soon as practical.
- Transfer of neonates to or between, neonatal services will be arranged by co-operative negotiation between providers based on previous relationship and agreed guidelines. Appropriately qualified and experienced staff will be assigned to the retrieval teams.

8.7 Transition for Specialist Neonates to Home Care

The following types and level of services are listed below to be provided for the infant who is well but requires transition to their home:

- in general, three visits for a single baby
- in general, six visits where there is a multiple birth
- facilitation of parents learning infant resuscitation
- breastfeeding advice and support
- a consultative service to community health services / well child providers
- liaison with other health professionals (as appropriate) on the infant's / family's behalf
- community advisory role in ward / department for discharge planning activities
- resource and facilitation of Health Promotion Activities within the home environment.

8.8 Specialist Neonatal Homecare

The following types and level of services that will be available:

- in general, three months Neonatal Home-Care for complex care cases
- in general, six months Neonatal Home-Care Services for babies on apnoea monitoring
- Neonatal Home-Care support for Management of chronic respiratory conditions (including oxygen dependency), congenital anomalies and terminal care, infants with feeding/complex needs, apnoea monitoring
- where necessary, establish formal links with local Diagnostic services
- a case management role for complex care cases in discharge planning and community care including early discharge and home based treatment – ie, phototherapy. This will include closer monitoring and up to daily visits
- co-ordination of resources provided for effective care

- paediatric outpatient clinic: may provide input into this follow-up service
- a consultative Neonatal Home-Care service to lower level neonatal services
- breastfeeding advice and support
- liaison with other health professional (as appropriate) on the infant's / family's behalf
- facilitation of parents to learn infant resuscitation
- resource and facilitation of Health Promotion Activities within the home environment.

8.9 Case Management: Neonatal Homecare Service

8.9.1 Relationship Management

- Linkages are developed with community health care agencies, support groups and professional forums.
- Professional relationships for consultancy are developed with the infant's GP and the Practice Nurses.
- Provides regional leadership in Neonatal Home-Care Services, including education programmes for staff in the region.
- Establish feedback loops to hospital based staff and other health professionals involved in the ongoing management of the infant / family.

8.9.2 Discharge Planning

- Provision of a community advisory role in the hospital's discharge planning activities and their participation in the discharge planning for complex cases.
- Co-ordination of required resources for effective care of infants in their own environment.
- Involve families and health workers in the assessment and planning process.

8.9.3 Health Promotion

- Resource and facilitation of Health Promotion Activities.
- Ongoing resources and services are facilitated for effective care for infant / family in their home environment.

8.9.4 Case Reviews

- Individual case reviews with the multidisciplinary team are carried out and service quality improvement initiatives identified.

8.10 Settings

Specialist neonatal inpatient and home care services will be provided in a setting that is most appropriate in order to achieve the best possible health outcomes for neonates / newborn / infant and their families and whānau.

Specialist neonatal inpatient services will be provided within secondary / tertiary maternity facilities.

Home care services will be delivered within the home of the parents or caregivers or specialist nurse led clinics.

8.11 Support Services

The treatment and management of neonates requiring specialist neonatal inpatient and home care services includes access to the following services, but is not limited to:

- Allied Health support services such as:
  - dietetic services
  - social work and counselling
  - early childhood development
  - speech-language therapy
  - physiotherapy
- Clinical Support services:
  - pharmaceutical services
  - laboratory services
- Interpreting Services (including sign language).

9. Service Linkages

This section sets out the requirements regarding linkages between this service specification and other related services and / or service specifications. Such services do not attract additional funding. Providers are required to establish working arrangements or protocols that reflect the size and scope of each organisation and degree of co-operation required between them.

Specialist neonatal inpatient and home care services deal with conditions can be highly complex and often present with co-morbidities. It is therefore important that the specialist neonatal inpatient and home care services are well integrated with other general and specialist paediatric services, maternity services and that there is effective consultation, liaison and referral between services and sub-specialities.

Professional Group	Usual Linkages
Lead Maternity Caregivers (LMC)	• Refer individual neonates to specialist services

Professional Group	Usual Linkages
Midwives, General Practitioners and specialist Obstetricians who are not the LMC where the woman / infant requires immediate access to specialist neonatal services	• Refer individual neonates as referral protocols to ensure intervention or further referral for specialist intervention.
Secondary/tertiary maternity services	• From and with other secondary and tertiary service providers
Hospital Services: Emergency Departments Diagnostic Imaging Services Specialist Paediatric Services Allied Health	Refer for clinical assessment, treatment and intervention as follows: First point of contact • X-Ray, Ultrasound, CT etc • Paediatric Medical and Surgical Specialties • Paediatric Haematology • Pathology laboratory services • Physiotherapy, social services, counselling, home care, speech language therapy, childhood development, dietetic services
Māori Iwi and communities	Liaise with local iwi and communities to ensure cultural appropriate and accessibility to specialist and home care neonatal services.
Pacific and New Migrant Community Health Workers	Liaise with local communities, community leaders, churches, temples, mosques etc to ensure cultural appropriate and accessible for specialist and home care neonatal services Interpreter services available where and when necessary.

10. Exclusions

These services are linked to but do not include:

- pregnancy and parenting education
- primary health care
- maternity services
- paediatric medical and surgical services where infants are admitted having been discharged as a newborn
- Well Child / Tamariki Ora services
- paediatric services

The specialist neonatal inpatient service must provide access to, but does not include:

- neonatal and paediatric surgery
- genetic testing and National Testing Centre to screen newborn infants for the presence of metabolites indicating the possible presence of a number of congenital conditions
- disability support services.

11. Quality Requirements

11.1 General

The Service must comply with the Provider Quality Standards described in the Operational Policy Framework or, as applicable, Crown Funding Agreement Variations, contracts or service level agreements.

11.2 Acceptability

When assessing the quality of the Service, the funder will consider the extent to which the Provider has met the following priorities:

- outcomes similar to optimal results at comparable institutions
- development, updating and use of written Clinical Policy Guidelines in accordance with New Zealand and International Research
- provision of an infant, families and whānau centred service that:
  - is physically safe for the infant, mother, father, families and whānau
  - is culturally safe for the infant, mother, father, families and whānau
  - has effective breastfeeding policy, practices, support and advice
  - provides parents the opportunity to learn infant resuscitation
  - fosters informed consent with parental involvement and infant treatment and management decision gives parent(s) clear explanation of the needs, condition and likely outcome of the neonates care
  - guarantees privacy and confidentiality
  - co-ordination of resources required for effective care.
- consultation with primary, secondary and tertiary maternity service providers, iwi and the community in developing explicit policy on their Neonatal Inpatient and Home-Care Services
- development of effective and efficient working relationships with linked services
- emphasis on preventive action to reduce the number of neonates requiring specialist care and / or hospital re-admissions
- multidisciplinary team reviews of cases in service quality improvement initiatives
- resources and facility health promotion and education activities.

12. Purchase Units

Purchase Unit Codes are defined in Health New Zealand's Nationwide Service Framework Purchase Unit Data Dictionary. The following Purchase Units apply to this Service.

PU Code	PU Description	PU Definition	Unit of Measure	Unit of Measure Definition	National Collections or Payment Systems
W06003	Specialist neonates	Inpatient specialist services for sick neonates. DRG WIESNZ Discharge. Additional Information is found in the NZ Casemix Framework for Publicly Funded Hospitals which gets updated every year.	Cost weighted discharge	A numerical measure representing the relative cost of treating a patient through to discharge	National Minimum Data Set (MNDS)
W06002	Neonatal Homecare	Domiciliary services post discharge for specialist neonates	Service	Service purchased in a block arrangement or uniquely agreed at a local level.	National Non-admitted Patient Collection (NNPAC)

13. Reporting Requirements

The Service must comply with the requirements of national data collections where available.

PU Code	PU Description	Reporting Requirements	
		Frequency	Reporting Unit
W06003	Specialist neonates	Quarterly	As per the specifications for the calculation of the current Inlier Equivalent Separations and Weighted Inlier Equivalent Separations
W06002	Neonatal Homecare	Annual	Qualitative and quantitative annual report.

14. Glossary

Not required

15. Appendices

Not required