

Discharge and Follow-up Process for Neonatal Services

Guideline Responsibilities and Authorisation

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Target Audience	NICU and maternity staff
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Guideline Review History

Version	Updated by	Date Updated	Summary of Changes
1	Melanie Trethowen	December 2021	New guideline
1.1	Melanie Trethowen	June 2022	Minor amendments to table for follow up criteria

Discharge and Follow-up Process for Neonatal Services

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Discharge and Follow-up Process for Neonatal Services

1 Overview

1.1 Purpose

To outline the discharge process and follow-up criteria for newborns from Neonatal Intensive Care Unit (NICU) and postnatal wards.

1.2 Scope

Neonatal and maternity staff working in NICU and postnatal wards.

1.3 Patient / client group

Newborns admitted to Waikato DHB.

1.4 Definitions

ANZNN	Australia and New Zealand Neonatal Network
CDC	Child developmental centre
CWS	Clinical work station
ENT	Ear nose and throat
GMA	General movement assessment
GP	General Practitioner
HUS	Head Ultrasound
LC	Lactation Consultant
LMC	Lead maternity caregiver
MDT	Multidisciplinary team
NICU	Neonatal Intensive care unit
NNP/NNS	Neonatal Nurse Practitioner/ Neonatal nurse Specialist
OPC	Outpatient clinic
PFM	Patient Flow Manager
PT	Physiotherapist
RMO	Resident Medical Officer
RN	Registered Nurse
ROP	Retinopathy of Prematurity
SLT	Speech language therapist

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SMO	Senior Medical officer
VNT	Visiting neurodevelopmental therapist

2 Clinical Management

2.1 Roles and Responsibilities

All Staff to ensure this guideline is adhered to when discharging neonates from NICU or postnatal wards, including SMO, RMOs, NNP/NNS, RN, discharge facilitator, receptionist.

2.2 Guideline

2.2.1 Transfer to another District Health Board

- [Transfer of Infants from Newborn Intensive Care Unit \(NICU\) to Referring Hospital guideline \(2710\)](#)
- Discuss with parents
- SMO to SMO handover
- RN handover
- Transfer checklist NICU ([Appendix A](#))
- Discharge letter to include ANZNN follow up (Shift test, HUS, ROP, Bayley's) and surgical or other specialities referrals

2.2.2 NICU discharge and follow up process

2.2.2.1 Discharge checklist / NICU patient admission (A1770HWF (Appendix I)

- Parent education (completed on form A1770HWF and NICU Discharge Education flipchart) ([Appendix I](#))
- Pepi pods – parent information/data collection form to be completed by RN
- Inform True colours – referral form/parent info ([Appendix K](#))
- Mothercraft (parent pamphlet G1755HWF)
- Home medication chart (email NICU pharmacist)
- Return of breast pump

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2.2.2.2 Services

- Discharge letter to be completed for all patients discharged from NICU
 - NICU Discharge Letter Guideline (CWS) ([Appendix J](#))
- Neonatal community service referral ([Appendix G](#))
- If meets criteria outlined below, NICU SMO - OPC booked via NICU reception, at 6 weeks post discharge, then as required until 2 years of age,
 - discharging clinician to fill out form 'NICU post discharge appointments' ([Appendix B](#)), faxed weekly to OPC by receptionist
- VNT follow up for GMA (for those not automatically qualifying)
 - A yellow referral form to be sent by the medical team
 - Infants with diagnosed syndromes / chromosomal disorders with associated developmental delays
 - Severe congenital musculoskeletal deformities (E.g. arthrogryposis, spina bifida)
 - Hypotonia/floppy babies
 - Neonatal abstinence where there is neurological/behavioural changes or concerns where a GMA has not been completed
 - Seizure disorders
- CDC GMA follow up with PT ([Appendix C](#))
 - self-referral through MDT meetings
- CDC follow up for <1250g within Waikato DHB ([Appendix D](#))
 - NICU administrator sends list to CDC – monthly
- ROP - Ophthalmology follow up at 9 months
 - NICU receptionist to email booking clerk ophthalmology (see [Retinopathy of prematurity - ophthalmologic examination and follow-up](#) guideline)
- LMC – up to 6 weeks postnatall
- Audiology -
 - Form completed by NICU staff ([Appendix E](#))

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2.2.2.3 Specific Referral processes

- ENT –
 - phone call to ENT registrar to arrange follow up, discharging NICU clinician to complete yellow referral form
- General paediatrics (paeds) –
 - yellow referral, clinic appointment to be booked depending on domicile (paeds outpatient have list of SMOs)
 - Copy of discharge letter to be sent to allocated paediatric SMO (if known)
- Surgical
 - yellow referral to surgical team involved
- Orthopaedic
 - yellow referral form to orthopaedic clinic
- Cardiac
 - yellow referral form to cardiology paediatrics SMO with clinic letter
- Dermatology –
 - Yellow referral form to be send to dermatology.acute@waikatodhb.health.nz
 - Include information such as time of onset (present at birth or later), increase in size/ stable, photographs showing size and distribution

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2.2.2.4 Table for follow up criteria

Criteria	Follow up
All infants	<input type="checkbox"/> Newborn hearing screening
If risk factors and / or no good clear response from Newborn hearing screening	<input type="checkbox"/> Targeted follow up with audiology
< 28/40 or <1250g	<input type="checkbox"/> Community Nursing NICU <input type="checkbox"/> NICU SMO / Paeds <input type="checkbox"/> CDC (Waikato <1250g only) <input type="checkbox"/> PT for GMAs <input type="checkbox"/> Ophthalmology <input type="checkbox"/> LMC/GP
<30/40 or <1250g	<input type="checkbox"/> Ophthalmology
<32/40 or <1500g	<input type="checkbox"/> Community Nursing NICU <input type="checkbox"/> NICU SMO / Paeds <input type="checkbox"/> PT or VNT for GMA <input type="checkbox"/> LMC/GP
Complex needs (home O2, tube feeding, cardiac)	<input type="checkbox"/> Community Nursing NICU <input type="checkbox"/> NICU SMO / Paeds <input type="checkbox"/> PT / VNT / CDC <input type="checkbox"/> SLT <input type="checkbox"/> DT <input type="checkbox"/> LMC/GP
NE – HIE	<input type="checkbox"/> Community Nursing NICU <input type="checkbox"/> NICU SMO / Paeds <input type="checkbox"/> PT / VNT / CDC <input type="checkbox"/> SLT <input type="checkbox"/> DT <input type="checkbox"/> LMC/GP <input type="checkbox"/> Paediatric Ophthalmology at 12 months

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2.2.3 Complex needs patients

- Discharge checklist ([Appendix F](#))
- Referral to Neonatal Community Service ([Appendix G](#))
- Home oxygen –
 - Order form (G3757HWF) ([Appendix H](#))
 - Parent information booklet (C1443HWF)
- Tube feeding
 - Parent education (Starship Parent education package, <https://starship.org.nz/nasogastric-tube-feeding/>)
 - Home feed pump order (email pumpsnz@nutricia.com)
 - Written feeding plan for home (RN or LC to arrange)
 - Referral to dietitian and SLT (on PFM)
- If general paediatrics follow up, see process **2.2.2.3**

2.2.4 Post-natal discharge from maternity (see also Admission and Discharge from Maternity Services Ref 5719)

- Discharge letter to be completed for all babies leaving NICU, even if transfer to postnatal wards.
- If clinic appointment required follow same process as for inpatient NICU (see above)

2.2.5 Transfer to Paediatric Ward

Multidisciplinary process involving paediatrics, medical and nursing team, as well as respective Starship specialists

3 Patient information

Parent education

- Car seat education
- Parent information booklet – Going Home: All you need to know (C1247HWF)
- Parents comfortable drawing up and administering medications (information pamphlets for Vitamin D, Ferrous Sulphate, Sodium Chloride, Caffeine, Phosphate, diuretics, Thyroxine, Gaviscon, Omeprazole)- <https://kidshealth.org.nz/tags/medicines>
- Complete discharge form (Appendix I, second page)

Doc ID:	6230	Version:	1.1	Issue Date:	18 JUN 2022	Review Date:	6 MAY 2025
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4 Audit

4.1 Indicators

- Discharge process is followed and referrals sent appropriately

5 Evidence base

- National guideline for at risk follow up
- Newborn hearing screening website


5.1 Associated Waikato DHB Documents

All links mentioned above

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Appendix A – Transfer checklist NICU – A1455HWF



Patient Label A1455HWF

Name: _____

NHI: _____ DOB: _____

Address: _____

Transfer checklist - NICU

Date of transfer: _____ Time of transfer: _____ Transfer to: _____

Hospital staff notified: Medical Yes No Receptionist

Nursing Yes No LMC

Family notified: Yes No

Transport: Hospital car Ambulance Commercial flight Charter flight Family

Accompanied by: Nurse Mother

Arrangements for air transport made by receiving hospital: Yes No

CHECK

- Well Child book completed
- Patient ID label
- X3 large patient labels
- Doctor's letter
- Monitor for transport
- Collect mother's breastmilk
- Admission / discharge summary sheet completed

PHOTOCOPIY

- Nursing care plan
- Updated blue social contact sheet
- Specific needs (eg. wound care)
- Weight chart
- Drug sheet
- Record sheets - Observation 2 days
- Apnoea and Brady sheet if significant number noted
- Lab results sheet
- Completed admission / discharge summary

Write in admission / discharge green book

FORM TO BE SHREDDED WHEN COMPLETED

Created by Melanie Thethowen - August 2006. Updated by the transport team - July 2010. 07/10/08

Appendix B – NICU post discharge appointments

NEWBORN INTENSIVE CARE UNIT POST DISCHARGE APPTS

Date	Patient Label	Discharge Date/SMO	Outpatient clinic follow up timeframe	Reason	Staff Initial

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Appendix C – CDC General Movement Assessment (GMA) follow up with PT

GMA's are currently only completed for patients that reside within Waikato DHB.

Writhing GMA is normally completed at ~35/40 (or once out of level 3) by trained Physiotherapist.

Criteria for assessment:

- < 32/40
- < 1500g
- HIE Stage 2-3
- Encephalopathy of other cause
- Abnormal findings on neuroimaging associated with CP (E.g. IVH)
- Meningitis or encephalitis
- None of the above but concerns from staff – E.g. poor feeding or progress

Writhing GMA outcome:

- Normal: referral to CDC Physiotherapy for routine follow-up and repeat GMA
- Abnormal
 - Poor repertoire: referral to either CDC Physiotherapy (for routine follow-up) or CDC VNT (for early intervention) depending on level of concern
 - Hypokinetic: referral to CDC VNT
 - Cramped synchronised: referral to CDC VNT

CDC Physiotherapy:

- Fidgety GMA completed at 12 weeks post term age
 - If normal GMA and development is on track then patient discharged
 - If normal GMA but mild developmental delays then remain under CDC Physiotherapy for early intervention
 - If abnormal at 12 weeks, repeat GMA at 14 weeks post term age. If normal and development is on track, then patient discharged
 - If abnormal at 12 and 14 weeks post term age, then referral is completed to VNT

CDC VNT:

- Patient seen as soon as able for early intervention. Intervention for high risk infants fortnightly or as deemed appropriate.
- Fidgety GMA completed at 12 weeks post term age, if abnormal then repeated at 14 weeks post term age

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- If absent fidgety or deemed high risk
 - HINE completed at 3-4, 6, 9, 12 & 24 months corrected age
 - AIMS completed from 8 weeks corrected
 - NBO for new born
 - SOGS II or Bayley IV (depending on whether meets criteria for baby clinic) - as deemed necessary or on discharge

Appendix D – CDC follow up for <1250g within Waikato DHB

Entry criteria

1. Babies discharged from the Waikato NBU born weighing less than 1250g
2. Premature baby born weighing under 1250g in another hospital and the family have moved to Waikato with baby having care transferred to Waikato DHB

1 Year:

- Families living within the Waikato DHB Region will be offered an appointment, at CDC in Hamilton, when their child is 1 year old (corrected age). This will involve a brief play based developmental assessment (Bayley III screener) and an opportunity for the family to discuss their child’s development and health. Families are seen by a Psychologist, Physiotherapist and Neonatal Paediatrician.
- If the child lives outside the Waikato and there are developmental concerns referrals to local services are typically made at discharge from the Waikato NBU. These babies are offered a comprehensive assessment at age 2.

2 Year:

- Involves **all** children that have been discharged from the Waikato Hospital New Born Unit (<1250g).
- Children/families will be invited to attend a developmental assessment when their child is 2 years corrected age. A Psychologist, Speech Language Therapist and Neonatal Paediatrician see the family.
- This involves a full developmental assessment (Bayley III) and opportunity to discuss any family concerns. The anonymised results of this assessment are included as part of the Australia New Zealand Neonatal Network audit project that provides information on how the Waikato babies are doing in relation to other premature babies.

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Appendix G – Nursing Referral Form – Community Referral Centre R1098HWF

Waikato District Health Board
Rural and Community Nursing referral form
Community Referral Centre (CRC)

Waikato District Health Board
 Name: _____
 NH: _____ or patient details
 Address: _____
 Fax to: Ext 22071 or 07 858 1071

Patient is aware of referral: Yes No
 Discharged address and phone contact (if different from above):
 Name: _____
 Address: _____
 Relationship: _____
 Phone - Day: _____ Mobile: _____

Patient's current phone number: _____
 ACC number: _____
 Work related? Yes No
 Date of injury: _____
 Discharge date: _____ Requested 1st contact: _____ Consultant: _____
 Allergies: _____ Patient ethnicity: _____ Provider of choice: _____
 Diagnosis related to this referral: _____ Medical history: _____

Pressure injury Yes No State stage: _____ Clauk completed Yes No
Community health professional and service requested. Tick below AND complete referral details box.

District nurse
 Administration of medications (attach medication authority) Palliative care
 Wound care (and care plans if CNS involved) Oxygen therapy (oxygen authority)
 Acute home support (supporting info, e.g. PT and OT assessments) Continence (MSU result)
 IDC (size of catheter, date of insertion) Other:
 Ostomy

Public health nurse
 Appointment DNA (child only) TB (Population Health referral only)
 Other (only health - parental consent required)

Specialty nurses
 CNS Neonates/Paediatrics (weight and observations) Collaborative care (with hospital)
 CNS Continence (MSU, bladder scan, PVRP exam results) Wound nurse practitioner

Referral detail (Mandatory - must be added to support the care required)

Other disciplines referred to: PT OT SW Dietitian Other (state)
 Rural and Community services pamphlet given to patient: Yes (Mandatory) No
 Discharge letter faxed with referral to CRC? Yes No
Referral source and contact details (Must be completed for referral to be actioned)
 Hospital ward / department GP (Name / Practice if referred)

Signature _____ Date _____
 Name _____ Designation _____
 Contact phone number _____ Contact email address _____

1 of 1 12/15/8

Appendix H – Paediatric home oxygen and related equipment request form G3757HWF

Waikato District Health Board
Paediatric home oxygen and related equipment request form

Waikato District Health Board
 Name: _____
 NH: _____ or patient details
 Address: _____

Date: _____ I confirm there will be no smoking in the house
 I agree the Fire Department be advised there is oxygen in the house
 Please fax to the:
 Community Services Equipment and Supply, Fax: 07 839 3897

Relevant medical history:

Client location
 Hospital
 Outpatient
 Inpatient
 Ward / Clinic _____
 Other: _____

Oxygen:
 Flow rate: _____ Duration: _____
 Daytime: _____ litres/ min Continuous
 Overnight: _____ litres/ min (minimum 16hrs/day)
 Route: _____ Overnight only
 Face mask Emergency only
 Nasal cannulae Other: _____

Equipment request: (tick to indicate)
 Oxygen concentrator Low flow box
 Oxygen cylinder Size A (414L litres) No _____
 Size D (1352 Litres) No _____
 Oxygen flow meter and regulator Standard
 Low flow

Nebuliser:
 Drug: _____ Dose / Frequency: _____

Nebuliser compressor equipment request:
 Standard
 Advanced (for nebulised antibiotic/anti fungal)

Oxygen consumables
 Number of cannulae per 3 months _____
 Regular supply required _____

Nebuliser consumables:
 Regular supplies required

Nasal cannulae
 Paediatric Infant Infant
 Intermediate Smallest

Face mask
 Not to be used at flow rates <5L/min
 Paediatric Other: _____

Frequency:
 Monthly (Amount) _____
 3 monthly (Amount) _____

Equipment to be sent to Ward Yes No
Equipment to be collected by Home Care Yes No

Signed: _____ Date: _____
 Name: _____ Designation: _____

To be filed in the Clinical Record behind the Other Results divider 1 of 1 12/15/8

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Appendix I – Preparation for Discharge checklist / NICU patient admission A1770HWF



Patient Label	
Name:	<i>or patient details</i>
NHt:	DOB: <i>admission</i>
Address:	

Preparation for discharge

	Yes	No		Yes	No
Breastfeeding			Bottle feeding		
Nipple shield (care of / weaning)			Using own teats		
Cue based feeds			Cue based feeds		
S/B Lactation consultant			Demonstrated preparation of formula		
Expressing			Sterilisation and cleaning		
Storage of milk discussed					

	Yes	No	
Pathway for discharge discussed i.e. Mothercraft / Rooming in			Date:
Booking made			Date:
Rooming in planned			Date:

	Yes	No	Pamphlet given	Discussed	Date / signature
Car seat arranged / assessment					
Baby clothing / bed / pepi-pod					
Bath demonstration and parents participated					
CPR DVD					
Shaken baby					
Contraception					
Domestic violence screen					
Feed / sleep routines					
GP enrol					
Immunisation					
Medication demonstrated and given by parent					
Signs of unwell baby					
SUDI-back-to-sleep / co-bedding / smoke free					
Support – family / community					
Home oxygen therapy-equipment / education given					
Long term naso-gastric feeding equipment / education given					
Ostomy care – equipment / education given					



Patient Label	
Name:	<i>or patient details</i>
NHt:	DOB: <i>admission</i>
Address:	

NICU discharge

Discharge history

Date: GP: _____ LMC: _____
 Address: _____ PKU 1st: _____ 2nd: _____ 3rd: _____
 Contact no's: Home: _____ Mobile: _____
 Age: _____ Gestation adjusted: _____
 Weight: _____ Head circumference: _____ Length: _____
 Room-in: _____ Mother craft: _____ Discharge summary for GP: Yes
 Audiology screen result: _____

Day of discharge is here Checklist – (please tick ✓) BEFORE YOU START check you have correct discharge address and latest phone contacts and alternative phone on ALL REFERRALS.

- Examined and cleared by SHO?
- Discharge appointments made? P Medical P Surgical
 Other _____ Other _____
- Check eye book – followup still required? Yes No
- Checked and cleared parent room
- Complete discharge form, weight chart and fax to: NNHC LMC
- Ring LMC (if within 6 weeks of birth)
- Admission / discharge book (weight, HC and feeding method)
- Well Child book
- Discharge letter and prescription given to parents
- Collected EBM

Day of discharge checklist completed by

Signature _____ Date _____
 Printed name _____ Designation _____

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Appendix J – NICU Discharge Letter Guideline (CWS)

NICU Discharge Letter Guideline (CWS)

SUMMARY

Brief summary of admission

HISTORY:

- Maternal
- Pregnancy, delivery and resuscitation

NEONATAL PROBLEMS:

- List problems
- Discuss each in turn

DIAGNOSES/PROCEDURE CODES:

MEDICATIONS:

- At discharge and prescription (in mg/kg/dose)

ESSENTIAL INFORMATION TO BE INCLUDED IN ALL LETTERS:

- NTC status (pre-set field)
- Vitamin K Status (pre-set field)
- Audiology result
- Immunisation status (pre-set field)
- Follow up recommendations (pre-set field)

INFANTS <1500g or <30 WEEKS GESTATION (additional essential information):

- HUSS – results, dates
- ROP check – results, dates and follow up recommendation

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Appendix K – True Colours referral



TRUE COLOURS REFERRAL FORM

Please email to: admin@truecolours.org.nz

URGENT / NON URGENT

CHILD REFERRAL DETAILS:		<small>FULLY OR PARTIAL</small>	
<small>HOSPITAL LABEL HERE:</small>	Family name:	First name:	M / F
NHI number:	DOB:		
Ethnicity:	IWI:		
GP:	Email:	Ph:	
Consultant:	Email:	Ph:	
Parent/caregiver names:			
Primary caregiver:		Relationship to child being referred:	
ADULT REFERRAL DETAILS:			
Family name:		First name/s:	
CONTACT DETAILS:			
Address:			
Email:		Ph:	
DETAILS OF REFERRAL:			
Sick child: <input type="radio"/>		Bereavement: <input type="checkbox"/>	Other: <input type="radio"/>
Diagnosis & extent of illness/Bereavement details:			
Current concerns:			
Referral consent from parent/caregiver: Yes / No			
Name & designation of referring practitioner:		Date:	
Email of Referrer:		Ph:	
Signature:			

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