

NEONATAL CARE AND DISCHARGE CRITERIA

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NEONATAL CARE ADMISSION AND DISCHARGE CRITERIA

1. PURPOSE:

- To provide a unified and consistent format that will be followed for admission and discharge to neonatal intensive care unit
- To ensure that each newborn infant is delivered and cared for in a facility appropriate for his or her health care needs and to facilitate the achievement of optimal outcomes.

2. INTRODUCTION:

- The guidelines set out the standards required of the hospital to ensure that a high standard of neonatal care at all levels continues to be provided in its Neonatal Intensive Care Units (NICU).
- Neonates are a specialized cohort of patients requiring an individualized approach in nursing care.
- Goals of care include minimizing stress, conserving energy, enhancing recovery, promotion of growth and well being and protecting sleep pattern.
- All healthy inborn more than 35 weeks of gestation and appropriate for gestational age should be rooming in with their mothers.
- For neonates who require a lengthy birth hospitalization, shortening the duration of neonatal hospitalization as much as possible is beneficial because it decreases the risk of hospital-acquired neonatal morbidity, shortens the period of separation of the parents from the infant, and lowers medical costs.

3. Healthy baby units:

the unit for accommodating otherwise healthy babies with no medical problem staying in the hospital because of maternal (post C/S for short period according to mother condition, Mother in the ICU, etc.) or social reason. (refer to MOH guidelines)



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	Capabilities	Admission criteria	Health Care Provider Types
Level I	 Provide neonatal resuscitation at every delivery. Evaluate and provide postnatal care to stable term newborn infants. Stabilize and provide care for infants born 35-37 weeks GA who remain physiologically stable. Stabilize newborn infants who are ill and those born at <35 wks. gestation until transfer to a higher level of care. 	 Infant with mild respiratory distress does not require oxygen supplementation can be watches for 1-2 hours as per a Senior doctor's order. Requiring support with feeding Minor anomalies that may need further investigations but don't compromise the infant's health in the neonatal period such as unilateral hydronephrosis, features of Down Syndrome Large for Gestational Age (LGA) with birth weight > 4 kg. Infant of Diabetic Mother (IDM) to monitor blood sugar as per hypoglycemia algorithm Term ≥ 37 week with PROM >18 hours who is asymptomatic and without history of chorioamnionitis (Refer to GBS Guideline) 	Pediatricians, family physicians, nurse practitioners, and other advanced practice registered nurses.
Level II Special care nursery	 Level I capabilities plus: Provide care for infants born ≥32 wks. GA and weighing ≥1500g who have physiologic immaturity or who are moderately ill with problems that are expected to resolve rapidly and are not anticipated to need subspecialty services on an urgent basis. Provide care for infants convalescing after intensive care 	 infants born ≥32 and less than 35 wks. GA and weighing ≥1.5kg and less than 2 kg with problems that are expected to resolve rapidly Continuous Positive Airway Pressure (CPAP), either transitional or extended stable CPAP. 	Level I health care providers plus: Pediatric specialist who has an experiences in neonatology.



Capabilities	Admission criteria	Health Care Provider Types
 Provide mechanical ventilation for brief duration (<24 h) or continuous positive airway pressure or both. Stabilize infants born before 32 wk gestation and weighing < 1500 grams as per standard of care. 	 Mechanical ventilation for conditions expected to resolve within 24 hours Growing preemie who is stable and who requiring oxygen during the feeding Stable neonatal from level III with a corrected over 30 weeks, and over 1.2 kg and does not requiring invasive ventilation, subspecialty support, surgical support, advanced treatments and investigations (transfers should be reviewed on a caseby-case basis between the tertiary and receiving sites). Temperature instability Transient tachypnoea of new-born Transient problems requiring cardiorespiratory monitoring/laboratory investigation Jaundice new-borns requiring peripheral IV fluid therapy and closer monitoring and intensive Phototherapy. Septic work and administration of antibiotics Gastrointestinal problems such as feeding problems severe enough to cause clinical concern. Hypoglycaemia (Refer to hypoglycaemia guideline) CNS problems Gongenital anomalies that may require intervention unavailable on level I, or an initial period of observation, eg Pierre Robin Syndrome. Family history of inborn errors of metabolisms 	



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	Capabilities	Admission criteria	Health Care Provider Types
Level III NICU	 level II capabilities plus: Provide sustained life support. Provide comprehensive care for infants born <32 wks. GA and weighing <1500g and born at all GA and birth weights with critical illness. Provide prompt and readily available access to a full range of pediatric medical subspecialists, and pediatric ophthalmologists. Provide a full range of respiratory support that may include conventional and/or high-frequency ventilation and inhaled nitric oxide. Perform advanced imaging, with interpretation on an urgent basis, including computed tomography, MRI, and echocardiography. 	 infants - <32 wk gestation and less than 1.5kg All gestational ages and birth weights with critical illness Meconium aspiration syndrome requiring mechanical ventilation Persistent pulmonary hypertension of the newborn Air leak syndrome require intervention Moderate and sever Hypoxic ischemic encephalopathy for cooling therapy Surgical conditions such as omphalocele, meningomyelocele, gastroschisis, imperforate anus and tracheoesophageal fistula. Invasive diagnostic test/procedures e.g. diagnostic laryngoscopy, ventricular tap, intravitreal injections, thoracentesis. Hemodynamically instability and Cardiac arrhythmia such as supraventricular tachycardia or congenital heart block Hyperbilirubinemia requiring exchange transfusion. Persistent hypoglycaemia (Refer to hypoglycaemia guideline) Any other baby whose clinical condition cannot be appropriately cared for in Level 2 (as per consultant decision) 	Level II health care providers plus: Certified Neonatologist, Pediatric medical subspecialists, pediatric anesthesiologists, pediatric surgeons, Pediatric ophthalmologists and neonatal nurse practitioners.



5. DISCHARGE CRITERIA

Discharge planning should be developed and implemented by a multidisciplinary team consisting of physicians, nurses, respiratory therapists, occupational and/or physical therapists, and social workers. The process can begin soon after an infant is admitted to the NICU and is continued through regularly scheduled planning sessions during hospitalization.

The following are the components of discharge planning.

1. Neonatal medical readiness

- Neurophysiologically stable
- There is no specific weight is required to discharge preterm infants. However, most infants do not fulfill these criteria before they can reach 1.6-1.8 kg
- Maintain normal body temperature in an open crib with normal room temperature (24 to 25°C) for at least 24 hours
- Demonstrate maturity of respiratory control without episodes of apnea and bradycardia, up to five days after the discontinuation of caffeine therapy.
- Demonstrate mature oral feeding skills (breast or bottle) that will allow enough nutritional intake to promote appropriate growth.
- Demonstrate a consistent pattern of appropriate weight gain for 3 days
- Patient should be discharged from NICU to other facilities in the hospital if he reached 4 months of age in term babies and 6 months corrected age in preterm babies

2. Vaccination and screening and care:

- Medically stable preterm infants> 1800 gm and 28 days old should receive full immunization based upon their chronological age consistent with the schedule and dose recommended for normal full-term infants
- Palivizumab should be given to eligible infants during respiratory syncytial virus season according to the guideline eligibility.
- All newborns require routine screening for metabolic screening, critical congenital heart disease, and hearing screening.
- Infants at risk for developing retinopathy of prematurity (ROP) should have routine ophthalmologic screening.
- Screening for intraventricular hemorrhage, imaging may be recommended prior to discharge to detect periventricular leukomalacia or white matter injury in at-risk infants.



3. Parental readiness and education

- The parents should demonstrate consistent involvement in their infant's care, and readiness and competency to provide home care (feeding techniques, positioning, medication administration, and respiratory treatments, training in gastrostomy and/or tracheostomy care and in the use of cardiorespiratory monitoring equipment if needed).
- Cardiopulmonary resuscitation training is advisable to all parents
- Parents also should be counseled about the importance of supine sleeping.
- Special medical equipment and services needed at home should be arranged (oxygen, mechanical ventilation, cardiorespiratory monitoring, or feeding pumps for transabdominal enteral nutrition).
- A social worker evaluation should be performed in order to assist with social or financial needs.

4. Follow up

- A full review of the infant's hospital course should be summarized and documented in infant's medical record
- For healthy newborns in postnatal ward discharged less than 48 hours after delivery, three additional postnatal contacts are recommended for all mothers and newborns follow up on day 3 (48–72 hours), one month old and at 2 month old.
- For infants with a complicated hospital course and ongoing health issues, review the results of diagnostic studies, such as cranial ultrasound examinations and echocardiograms and Subspecialty consultants who will provide follow-up care should see the infant prior to hospital discharge.
- Follow up arrangements can be made for primary care, specialty care (e.g.pulmonology, cardiology, surgery), and neurodevelopmental follow-up.
- A plan for nutritional support and monitoring of growth also should be established.
- Neurodevelopmental follow-up in a special program should be arranged for extremely preterm and other high-risk infants. (per MOH guidelines)
- A visit should be scheduled within two to four days of discharge and arrangements made for ongoing care, including subspecialty care if needed.
- Dietitian consultation can help Infants with chronic disease, such as chronic lung disease, short bowel syndrome, cholestatic jaundice, or osteopenia.



- > Levels of Neonatal Care | From the American Academy of Pediatrics ... pediatrics.aappublications.org/content/130/3/587
- > Level III neonatal intensive care unit (NICU) Floyd Medical Centerwww.floyd.org/services/Pages/nicu.aspx
- > NW Newborn Clinical Guideline NICU Admissions, Discharges, and
 - ...www.adhb.govt.nz/newborn/.../Admission/NICUAdmissionsDischargesAndTransfers...
- > Neonatal admissions | Great Ormond Street Hospitalwww.gosh.nhs.uk > Health professionals > Clinical guidelines
- Selection criteria in the NICU: who should get effective critical care?https://www.ncbi.nlm.nih.gov/pubmed/19517656
- > Criteria for Neonatal Transfer AND Neonatal NICU Admission Criteria ... www.tomwademd.net/criteria-for-neonatal-transfer-and-neonatal-nicu-admission criteria
- > Admission to NICU CA4068v3 www.nnuh.nhs.uk/publication/download/admission-to-nicu-ca4068v3/
- Discharge Criteria for the NICU | NICU Discharging Information
 www.mercydesmoines.org/childrenshospital/variety-nicu-discharge
- Hospital Discharge of the High-Risk Neonate | FROM THE AMERICAN ... pediatrics.aappublications.org/content/122/5/1119
- Going home: Facilitating discharge of the preterm infant NCBI NIH https://www.ncbi.nlm.nih.gov > NCBI > Literature > PubMed Central (PMC)
- > NICU Discharge Guidelines Health Net

https://www.healthnet.com/static/general/unprotected/.../NICUDischargeGuidelines.pd..

- Neonatal Discharge Checklistafhsr.med.sa/cqi_web/web/cqi_docs/3.Documents/.../7540%20761%201522.pdf
- > Download Mid Essex Hospital Services NHS Trust

www.meht.nhs.uk/EasysiteWeb/getresource.axd?AssetID=6454&type=full..