ADMISSION OF A NEONATE TO THE GRACE CENTRE FOR NEWBORN CARE

PRACTICE GUIDELINE ©

DOCUMENT SUMMARY/KEY POINTS

- This document provides information on the admission process for neonates in Grace Centre for Newborn Care
- Neonates are admitted from other hospitals via the NETS team, Westmead NICU, Westmead delivery suite, other hospital transfer teams, NSW ambulance or the Emergency Department at CHW

Key Performance Indicators

- Parents are informed and aware of the facilities available during their infant's stay
- All infants have two identification bands on admission and transfer
- Admission assessment is documented in the progress notes
- The mother's intention to breast feed is documented in the admission summary
- The patient has a Neonatal Skin Risk Assessment Score (NSRAS) documented within the first 4 hours of admission

CHANGE SUMMARY

- Updated content to reflect changes in process

Approved by:	SCHN Policy, Procedure and Guideline Committee	
Date Effective:	1st August 2019	**Review Period**: 3 years
Team Leader:	Nurse Educator	**Area/Dept**: GCNC

READ ACKNOWLEDGEMENT

- Clinicians working in Grace Centre for Newborn Care e.g. Registered Nurses, Clinical Nurse Specialists, Clinical Nurse Educator and Registrars etc.
- An in-service is provided to inform clinicians regarding updates and changes to the guideline.
- Hardcopies of the guideline are available within the unit for clinicians to read. Upon reading, clinicians are asked to sign in order to verify reading the guideline.

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This document reflects what is currently regarded as safe practice. However, as in any clinical situation, there may be factors which cannot be covered by a single set of guidelines. This document does not replace the need for the application of clinical judgement to each individual presentation.

Defining Statement

The aim of this practice guideline is to facilitate the admission process, thereby ensuring the correct information and process for the infant. A detailed handover between the multidisciplinary teams is important and needs to be understood and practised by each member of the team[1]. The collection of baseline information on the infant's condition on arrival to Grace Centre for Newborn Intensive Care (GCNIC) is essential to aid with investigations of the infant's condition, diagnosis, management and outcome[1]. Furthermore this information guides new members of the multidisciplinary team to assist with a smooth transition to newborn intensive care[1].

Staff can assist parents during the stressful experience of the Neonatal Intensive Care Unit (NICU) through establishing therapeutic relationships, implementing emotional assistance, and providing precise and clear information. Family centred care is practiced which includes supporting parents in caring for their infant, contacting authorised interpreters for non-English speaking parents to enable them to clarify any questions and receiving all the required information[2]. When parents are supported they become more involved, secure, and are encouraged to take a partnership role in the care of their fragile (vulnerable) infant. The experience for parents in the NICU can be traumatic and stressful during this emotionally intense time with possible feelings of stress, concerns, depression, and hopelessness[2]. Therefore interventions for the parents include orientation to the NICU environment, the resources available, visiting times for family and the availability of the neonatologist. Family centred and developmentally supportive care has been implemented as the model of care in Grace Centre for Newborn Care to enable parents and staff to work together in the best interest of the infant and the family[2].

Admission of an Infant

Preparation for the admission of a sick infant begins prior to the arrival in the NICU. An organised admission process can assist in the speedy assessment and stabilisation of the infant.

All requests for admission need to be discussed with and accepted by the on-call neonatologist who liaises with the nurse in charge.

Preparation prior to admission

- Obtain information regarding the infant's weight, gestational age, current condition and management from NETS or the referring hospital (Double check the patient's name and details with 2nd person to avoid mistakes and ensure correct information). If the baby is born after hours obtain a MRN from the emergency department by contacting the triage desk.
- Assemble the charts and relevant documentation ready for the arrival of the infant.
    - Enter infant's details into the electronic medical record with name of the admitting Neonatologist and the transferring hospital[3].

- Check the Medical Record Number (MRN) with a second person to ensure accurate documentation.
- IV fluids are prescribed by the registrar when confirmed from NETS team[3].
- If the infant is admitted after being home for some time document in the electronic medical record the names and contact details of the community health providers involved in their care and notify the Nurse Practitioner/Discharge Liaison Nurse Specialist.

- Ensure that the appropriate equipment is ready and in working order for the allocated bed space:
  - A pre-warmed incubator for infants weighing less than 1800g or who are less than 30 weeks gestation, or open care system for other infants requiring assessment and/or surgery [1].
  - The monitor is turned on, the infant's details added. Alarm limits are set (as indicated by the clinical status of the infant) and placed in 'standby' mode.
  - The relevant monitoring modules and cables (e.g. vital signs, saturation probe, manual BP, arterial BP, CO2 end tidal monitoring, temperature probe) are assembled and ready for use.
  - Prepare the equipment; ID bands, ECG leads, temperature probe, adhesive bandage for saturation probe, two swabs + pathology bag, stethoscope, nappy, yellow top jar, FG 8 or 6 nasogastric tube, bed linen.
  - Bedside trolley with suction equipment (2 oral suction catheters size 8 FG, in-line suction catheters size 6 FG, suction packs), Rediwipes, measuring tape, nappies, spare linen, 10ml enteral syringes and pH strips.
  - Anaesthetic resuscitation bag, manometer and tubing assembled and in working order.
  - Suction jar, tubing and catheters are assembled and checked.
  - Ensure the resuscitation trolley and intubation equipment is available.
  - The ventilator is set-up, tubing checked and working. Connect to wall air and oxygen supply. Prime the humidifier with 1000mL water for injection bag, set to ETT mode. Pre-set ventilator parameters if they are known. Correct ventilator set up must be verified and signed for by NUM or CNS[2].
- Hostel accommodation for parents may be organised at this time. Parent's rooms on Grace maybe used for afterhours admissions if available.

On admission of infant

All infants

- On admission obtain a detailed clinical handover of the infant's condition, interventions and treatments as this plays an important role in gaining correct information to enable consistency of care[1].

- The collection of baseline information of the infant's condition on arrival on the ward is essential to enable any deviations during the course of the admission, examinations and any investigations[1].
- Clarify any questions you may have with nurse and team handing over the care of the infant before they leave the unit[1].

Safe Handover = Safe Patient

- Take two MRSA admission swabs from nose and throat. Send these with the appropriate Power-chart labels to pathology via the Lamson tube located in the on-site laboratory[4].
- A complete physical assessment of all infants is performed by a registered nurse[3] observing colour, breathing, femoral pulses, movement, activity and behavioural response to handling. Document the assessment in the patient's electronic medical record.
- Note any physical abnormalities in the patient's electronic medical record, make sure a clear description is given.
- Record the temperature, heart rate, respiratory rate and SpO_2/Tc monitor readings in the patient's electronic medical record[3].
- Measure the blood pressure. If no arterial pressure monitoring present use a non-invasive BP cuff with the appropriate/correct size cuff, according to the infant's weight[3].
- Measure the occipital frontal head circumference and record in the vital chart in the patient's electronic medical record[3].
- Weigh the infant. Deduct all additional applications from the infant's weight using the appropriate deduction sheet[5]. Record weight in the patient's electronic medical record. Ensure the patient is physiologically stable prior to obtaining weight, if this is unclear check with a Fellow or NNP.
- The registrar/Neonatal nurse practitioner (NNP) will take admission bloods via venepuncture. At this time, collect a capillary blood sample for a blood glucose, electrolytes, lactate and gas as indicated by the clinical status of the infant[3]. If the patient is likely to go to surgery within the first 24hrs of age, also collect a Newborn Screen sample at this time.
- Record a urine analysis (UA) and a Specific Gravity[3].
- Observe the infant for two minutes and perform a baseline pain assessment score using the mPAT (modified Pain Assessment Tool) score[6]. Please refer to Pain Management of Newborn Infants guideline[3].
- Attend a Neonatal Skin Risk Assessment Score (NSRAS) within the first four hours of admission, after completing a comprehensive inspection of the infant's skin surfaces,

ensuring to check under devices that may be pressing on the skin. Document this in the electronic medical record.

- Some infants may require a neurological assessment to gauge their gestational age. When stable, attend/assist with a neurological assessment (Dubowitz) and if required a gestational assessment (Ballard). The completed charts are stored in the medical records at the cotside[3].
- Check the infant's record for vitamin K (Konakion) administration and Hepatitis B status, document in the electronic medical record. If the documentation is missing, a call to the maternity/referring hospital will be required.
- Enquire about the location of the placenta that is if it was stored at the referring hospital or sent to histopathology.
- Assist with any diagnostic procedures, always supporting the infant according his or her behavioural cues with developmental care to alleviate stress and giving sucrose for procedural pain[4, 5].

Documentation

- The neonatal registrar or NPP is responsible for obtaining informed consent for treatment from the parent/guardian[7].
- Place two ID bands with the infant's name, medical record number, date of birth, AMO and ward on the infant's limbs. Two identification bands on 2 limbs are required at all time.
- Complete the Newborn Screening card and ask the parents to sign the consent section of the card after providing them with the information brochure. Document the Newborn Screening in the electronic medical record and in the infant's Health Record (Blue) Book.
- Enter the parents' contact numbers and details of the GP in the notes[7].
- The admitting nurse documents an assessment in the electronic medical record. Discuss the outcome of the assessment with the admitting doctor.
- Have sucrose prescribed on the medication chart by an accredited nurse[5].
- Ask the mother if she intends to breast feed and record her feeding intention in the admission notes. Ask if she requires assistance with the breast expressing equipment.

Ventilated Infants transferred by NETS or Westmead

Observations

- When the transport team arrives the admission procedure is a shared responsibility until the NETS team has completely handed over the infant's care to the admitting team.
- The medical registrar/NP/fellow should be present or notified immediately when the infant arrives[3].
- Baseline observations are recorded by the admitting nurse whilst the infant is in the transport crib.

  - These include: axilla temperature, skin temperature, crib temperature and setting, heart rate, respiratory rate, oxygen saturation, transcutaneous oxygen and/or carbon dioxide, ventilator settings[3].
  - A blood gas may be collected by the NETS team prior to transferring the infant to the incubator/open care system.

- Note infant's colour and perfusion, signs of respiratory distress, general activity during transfer of infant to incubator or open warmer system, response to stimuli or pain[3]. These infants can be muscle relaxed for the NETS transfer.
- The infant's condition should be constantly monitored for changes with handling[3].

Monitoring

- Check the ventilator settings with the registrar and ensure a medical order is written. Connect the infant to the ventilator, and listen to the air entry in the chest[2].
- Measure the ETT and check correct taping measurement with transferring nurse. Ensure ETT is taped securely[2].
- Ensure bedside monitoring has been applied and is functioning prior to disconnection of transport monitor.
- Ensure the temperature probe is positioned securely along the infants flanks below the axilla or on the infant's abdomen, avoiding the infant's liver as the liver carries out heat generating reactions that could affect temperature assessment[8].
- If the infant is nursed in an incubator the environmental temperature is set within the infant's neutral-thermal zone[1] (check chart - Thermoregulation in Neonatal Care guideline).
- Attach the CO_2 end-tidal monitoring and note reading[2].
- Dual SpO_2 monitors are used for infants with a structural cardiac defect (pre ductal: preferably right hand; post ductal: left and right foot[9]).

IV fluids

- Connect transport IV fluids to syringe pump at transfer prescribed rate until the orders for the fluids are re-prescribed. Once re-prescribed, the fluids must be changed and reconnected to the patient.
- Check the IV insertion sites for any redness, swelling or signs of infiltration. Ensure the IV cannula is patent and taped appropriately so that the tip of the infusion site is visible[6].
- If an arterial line is present a blood gas may be performed. Consider collecting EUC, FBC and X-match if required. If a sample of maternal blood was sent with the baby ensure that the referring hospital has labelled the tubes with mother's and baby's name with two signatures and send to laboratory for X-match. If the samples are not signed by two people, the samples are invalid and will be rejected by the laboratory.
- Ensure correct positioning of transducer and "zeroing" of arterial line, as well as appropriate trace on the monitor. Monitor wave forms and interpret them if applicable. Please refer to arterial monitoring guideline.

Procedures

- If clinically indicated, insert a naso-gastric or oro-gastric tube if not already placed. If the patient is medically and surgically cleared to commence enteral feeds, advocate for breastfeeding or breast milk feeding if it is the mother's intention.
- Aspirate the gastric tube with a 10mL syringe and check position of tube with pH test less then 5 and replace tube if correct placement doubtful[7, 10]. Please refer to enteral feeding guideline.
- Empty the urine bag and measure the volume of urine. Urine may also be collected by placing cotton balls in the nappy to saturate with urine for measurement. Consider an indwelling catheter if required.
- If the infant has not been weighed within the last 24 hours, and if the infant's condition permits, weigh the infant.
- Assist the medical officer with any procedures that may be necessary, remember to use sucrose before undertaking painful, or potentially painful procedures[5]. Ensure that the patient is also supported with non-pharmacological measures such as swaddling, dummy, facilitated tucking and hand hugs.
- Inform the neonatologist when the parents have arrived.
- Repeat x-rays may need to be performed to confirm the position of the ETT. A nurses needs to be present and assist with positioning and supporting the infant. Document all procedures in the electronic medical record.

Families

Support for parents

- Ensure parents are supported during their infant's admission procedure. You may need to ask another staff member for assistance or involve the social worker.
- Explain the admission process and arrange for them to be shown the parents lounge area with tea and coffee facilities and explain the use of the room is for parents only.
- Give them the parent admission pack which contains useful information.
- Ensure all information is explained to the parents, such as unit phone number/s, the hostel accommodation or ward en-suite accommodation, the parents lounge and explain the procedure for entering the unit by using the intercom on arrival.
- Consider contacting authorised interpreters for non English speaking parents to enable them to ask questions and receive all the information they need[1]. Check to see if the medical team need to use the service at this time.
- Acknowledge parents each time they arrive in the nursery; introduce yourself including your correct professional title and show them the location of their baby's bedspace.
- Show parents where the lockers are located and explain how the locker keys may be obtained.
- Show them the parent bedrooms and explain the priorities and process for allocation. Show them where the toilet is located.

- Explain the use of the *Baby Diary*.
- Explain the milk room and storage of the mother's expressed milk if required and arrange for the Lactation Consultant to see the mother[12].
- Set up breast pump equipment for the mother and explain expressing and procedure.

Visiting guide

- Explain the intercom system to the parents and their visitors. They are required to press the buzzer each time they come, stating who they are and who they are seeing. Advise them that all visitors are to wait in the external waiting area. The Parent Lounge is for use by parents only.
- Families are welcome in GCNIC and parents are encouraged to be in attendance and care for their baby at any time[3].
- Relatives and friends are welcome to visit when the parents are present or with permission from the parents who have informed the nursing staff of their wishes. This permission should also always be in writing and preferably obviously visible to nursing staff either with the infant's notes or attached to the bedside monitor, next to the infant's name tag.
- Only siblings and not any other children are allowed into the nursery. Siblings should be supervised at all times by the family. If they are unwell entry into the nursery is not recommended. Their immunisation status should be current.
- Because of the limited space it is recommended for only two visitors (including parents) to be at the bedside at any one time.
- Important information regarding an infant's condition, treatment or prognosis should be directed primarily to the parents. This information may be shared with other family members if the parent's wish[13].
- The designated baby rest period is from 1200hrs to 1500hrs each day. Parents are encouraged to be with their baby.
- Visiting hours for other visitors are as such 1000hrs to 1200hrs and 1500hrs to 2000hrs.
- Explain the hand washing procedures to parents and visitors including the importance of removing of jumpers, jackets, watches and jewellery[3].
- Discourage visitors from wandering around the ward to look at other babies[13].
- Infants are not discussed with visitors or other parents[13].
- Much of the information provided to parents when their baby is admitted to the unit will need to be repeated on subsequent visit. This is normal as stressed families may not take in all the required information.

Consent for treatment

- All treatments and procedures require informed consent. This is to be obtained by the medical officer, surgeon or nurse practitioner for each individual procedure.

- An additional consent form should be signed for any treatment, formula and donor breast milk including operations, blood transfusions, immunisation, imaging and the use of intravenous contrast[3].
- In some situations verbal parental consent by phone may be obtained by the Medical Officer or nurse practitioner when written consent is unobtainable. The process and outcome of the consent must be documented in the medical record[14].
- Medical staff and nurse practitioners are responsible for obtaining and witnessing all consent forms. Consent is formally recorded in the medical record[14].
- If consent has not been obtained prior to the surgery or procedure, then the attending consultant or surgeon needs to be informed prior to the infant leaving the unit.

Admission checklist

Initial Handover

Maternal History
Gestational Age
Apgar Scoring
Attend High Risk Delivery
Identifying Infant

Vitamin K
Immunisations
Newborn screening/hearing
Dextrostix
Access:

- Peripheral IV
- PICC Line
- UAC/UVC
- Arterial Line

Weight - Scale
Urine Output/Passes urine
Bowels open/passed meconium

Initial Physical Assessment:

Anomalies
Resp Status / Breath Sounds
Skin colour
Fontanelle
Apical Pulse
Blood Pressure
Skin Care / Cord Care
Head circumference

Thermoregulation:

Temperature (axilla)
Use of Incubator
Use of Radiant Warmer

Access / Care:

PIVC
PICC Line
Central Line
Umbilical Artery / Venous Line
IV Pump
Syringe Pump
Administer IV Medications

Enteral feeds

Assist / Instruct Breastfeeding
Collection (expressing) / Storage of Breast Milk
Assist / Instruct Bottle feeding

Gastrointestinal

Assess Bowel Sounds
Assess Abdominal Girth (soft, firm etc.)
Nasogastric/Orogastric Tube Insertion & Care
Collect Urine (cotton balls)/?IDC
Urine Analysis (pH, Sp. Gr., Glu)

Pulmonary

Resp. Status / Breath Sounds
Pulse Oximetry
Respiratory
Ventilator status and ventilator settings
Obtain ABGs (Heel stick / Arterial Line)
Interpretation of ABG
Evaluation of X-ray Reports
Suctioning (Nasal, Oral, ETT)

Cardiovascular

Assessment of Pulses
Cardiac / Respiratory Monitor
Assessment of Perfusion
Assessment of Heart Sounds/Murmurs
Blood Pressure – Non-invasive
Blood Pressure - Arterial Line
ECG Interpretation

Further

Assess Neurological Status
Inform parents about Newborn screening and Hearing, document outcome and process
Assess Hearing of Neonate and Newborn screening if applicable
Assess Eyes of Neonate
Assess Pain

Affiliated links

The Children's Hospital at Westmead policy documents:

1. Discharge/transfer of infants from GCNIC to other wards or hospitals
   http://webapps.schn.health.nsw.gov.au/epolicy/policy/1584
2. Thermoregulation in Neonatal Care Practice Guideline:
   http://webapps.schn.health.nsw.gov.au/epolicy/policy/4354
3. Respiratory Support in the NICU Practice Guideline:
   http://webapps.schn.health.nsw.gov.au/epolicy/policy/4507
4. Pain Management for Newborn Infants Practice Guideline:
   http://webapps.schn.health.nsw.gov.au/epolicy/policy/3886
5. Developmentally Supportive Care for Newborn Infants Practice Guideline:
   http://webapps.schn.health.nsw.gov.au/epolicy/policy/948
6. Sucrose: Management of Short Duration Procedural Pain in Infants Practice Guideline:
   http://webapps.schn.health.nsw.gov.au/epolicy/policy/4022
7. Peripheral Cannula insertion and management:
   http://webapps.schn.health.nsw.gov.au/epolicy/policy/4023
8. Central Venous Catheter Management in Neonates Practice Guideline:
   http://webapps.schn.health.nsw.gov.au/epolicy/policy/3963
9. Feeding the High Risk Neonate – Neonates Practice Guideline:
   http://webapps.schn.health.nsw.gov.au/epolicy/policy/1042

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