The Newcastle upon Tyne Hospitals NHS Foundation Trust

Version No.:	1
Effective From:	19/05/2022
Expiry Date:	1/05/2025
Date Ratified:	19/05/2022
Ratified By:	Neonatal and NeTTs
Authors	Laura Robson, Robert Tinnion

Introduction

This guideline provides general guidance for NNeTS Nurse Specialists when moving babies as nurse only transfers.

The aim of this guideline is to determine the criteria for 'nurse-only' transfers. There is currently no clear guidance for babies with the conditions discussed below to be transferred by NNeTS specialist nurses. The aim is to provide more guidance regarding which neonatal transport requests require the accompaniment of a NNeTS ANNP/medic.

Guideline scope

This guideline provides clarification of the type of transfers that can be carried out as nurse only for the Northern Neonatal Transport Service (NNeTS). This guidance does not cover transports that may be made single-crewed by either a solo ANNP or Medic.

All decisions will be made by the consultant on call for NNeTS after reviewing the referral and reported clinical condition of the baby.

This guideline is for use by all members of the Northern Neonatal Transport Team (NNeTS) involved in moving babies within our scope of practice.

Upon arrival at the referring unit, the NNeTS nurse should receive the handover of the baby, review the observation chart and ensure there is nothing outside that was expected clinically. If the baby's condition is not found to be suitable for a nurse only transfer, the NNeTS Team Lead/NNeTS consultant should be informed as soon as possible to discuss the issue/make arrangements for the transfer to proceed with an ANNP/medic.

Evidence Review and Evaluation

Following the examination of the literature and reading guidelines from other UK based neonatal transport teams and also those worldwide; it is evident that only a small number of teams perform transfers as nurse only. The inclusion of neonatal nurse practitioners in 'nurse only transfers' narrows down the amount of evidence available as it is unclear from some articles what is classified as 'nurse only' but including ANNPs. From the information gathered, we will set out specific nurse only guidance NOT including ANNPs in order to give NNeTS specialist nurses clear and concise criteria.

Some of the specific criteria set out by other regional transport teams enables nurses to move babies above a corrected gestational age of 27-28 weeks and above 1000g in weight (EMBRACE 2020) and ANTS (2018). However their guidance discusses transferring of babies on both nasal CPAP and high flow therapy, whereas our team has separate guidance for transferring babies on high flow therapy. In the Northern Neonatal Network, there are no LNUs so transport of babies between units on CPAP is rare in anything outside an uplift of level of care being provided. Where there is an uplift, there remains a significant risk of needing to intervene to increase the level of respiratory support, requiring ANNP/medic presence. It has been decided, therefore, that nurse only transfers will not be used for babies on nCPAP support.

Whilst gathering information from other neonatal transport teams throughout the UK, it seemed important to consider the opinions of the NNeTS specialist nurses in respect to what they felt comfortable moving. Following a brief questionnaire, the evidence showed the following:-

- A baby on a high flow between 4/5 litres/minute
- In 30-40% oxygen
- A baby that has been stable on high flow for more than 48 hours

From the information gathered, it assisted in setting our own specific guidelines the information was obtained and compared. It was evident that our recommendations were comparable, especially with Embrace in relation to NOT moving babies requiring CPAP as a nurse only transfer.

Main Body of the guideline

The classification of babies that have been deemed as suitable to be moved by NNeTS specialist nurses are:

- Routine special care transfers (see BAPM levels of care 2011) and planned repatriations

  This calibre of baby as determined by the BAPM guideline 'Categories of Care' (2011) requiring special care, are those who require any of the following:-

  - Oxygen by nasal cannula
  - Feeding by nasogastric, jejunal tube or gastrostomy
  - Continuous physiological monitoring (excluding apnoea monitors only)
  - Care of a stoma
  - Presence of an IV cannula
  - Baby receiving phototherapy
  - Special observation of physiological variables at least 4 hourly
  -

(See appendix 1 for full details of inclusion criteria for Intensive care, High dependency care, special care and transitional care)

- Babies on **established** high flow oxygen therapy for **>48hours**:
  - $\leq$ 5 litres/minute and $FiO_2 \leq 0.35$ moving from NICU centre (or equivalent) to another NICU centre (or equivalent) within our region. (see separate flow chart)

- A baby with a cardiac condition but who requires no respiratory support (not including low flow oxygen), no inotropic support and who is **NOT** on Prostaglandin E2 (Prostin)

  NNeTS move a number of cardiac babies each year, most of these transfers occur from the RVI due to the close proximity to the cardiac centre based at the Freeman Hospital, therefore babies with a diagnosed cardiac condition are aimed to be delivered at the RVI. Due to the vast number of cardiac conditions, it has been decided that the babies deemed safe to be transferred as nurse only should **not** be requiring Prostaglandin E2 (Prostin), not on any type of respiratory support (excluding low flow oxygen alone) or requiring any inotropic support.

- A well-baby with bilious vomiting or aspirates, on no respiratory support, where the consultant on for NNeTS has seen and reviewed the abdominal x-rays, (see bilious aspirate flow chart)

  For any referral where this criteria is met, the main aim is to get the baby to the RVI where a contrast can be performed by a paediatric radiologist (as there is no 24 hour service offered by other hospitals within the northern region). The flow chart below gives clear and concise guidance as to whether it is required for a medic to accompany the NNeTS nurse on the transfer. This flow chart also allows the person taking the referral to work through the clinical symptoms of the baby and escalate to include a Doctor/ANNP if required.

  There is a guideline entitled 'Guideline for the transfer of all infants with possible need for urgent surgical intervention (for NEC or similar pathology)' available on the NORNET website (www.nornet.org.uk) which can be accessed by all of the neonatal units within the region. This gives neonatal teams' clear guidance on managing the baby with a possible surgical condition prior to phoning NNeTS and what clinical adjustments can be made before we arrive to stabilise the baby's condition.

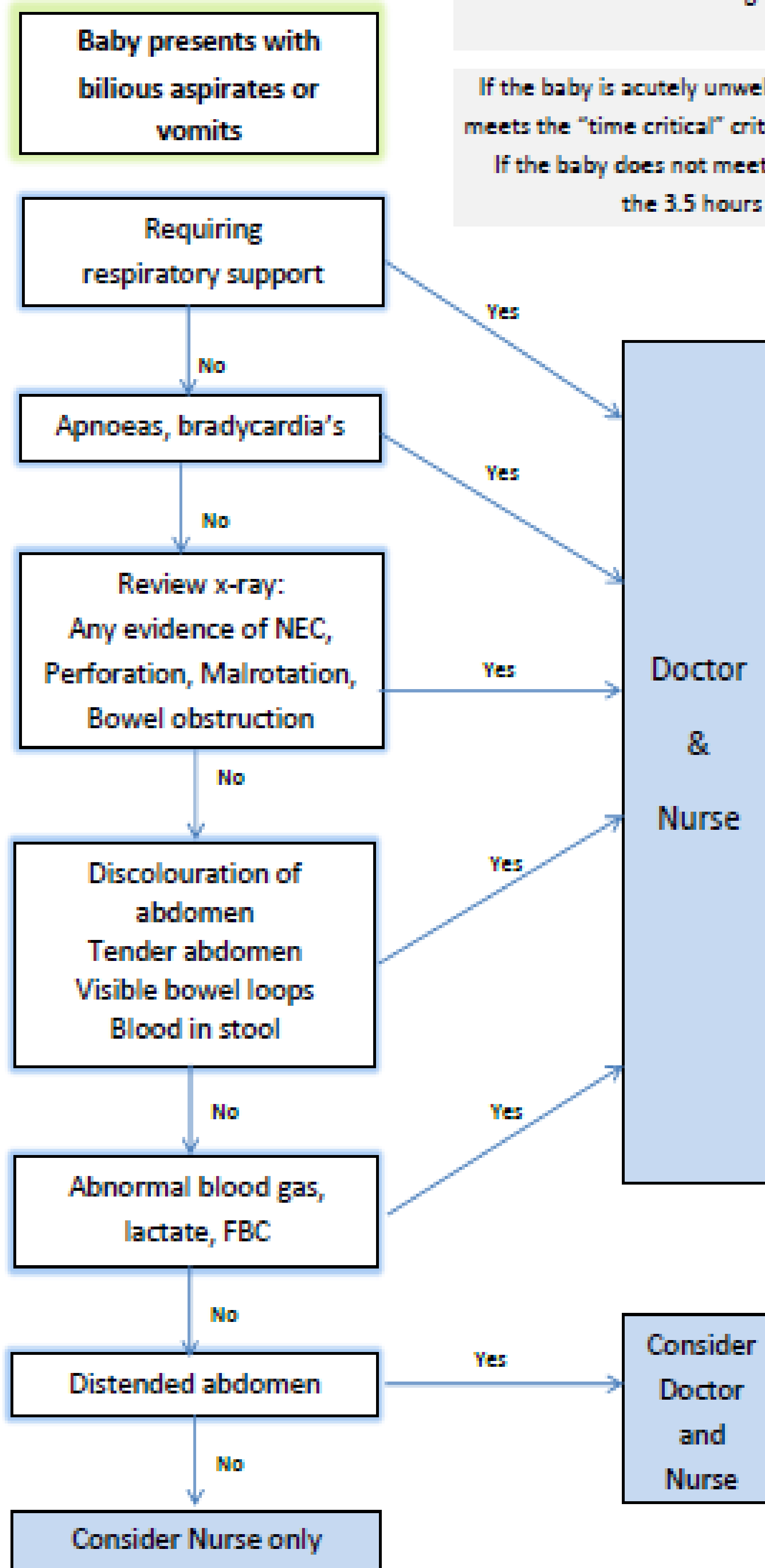
Bilious Aspirates

NNeTS
Northern Neonatal Transport Service

Baby Presenting With Bilious Aspirates

Have referring unit consulted the NNN Surgical referrals guideline?

If the baby is acutely unwell, consider whether the referral meets the "time critical" criteria and respond appropriately. If the baby does not meet this, it should be moved within the 3.5 hours to cot side, acute uplift criteria.



V Turnbull
L Hedley
2019

Training, Implementation, Resource Implications

All NNeTS specialist nurses are trained to a high standard in caring for premature babies, it is a requirement that they have a minimum of 2 years intensive care experience prior to joining NNeTS. Once a NNeTS specialist nurse has completed an 8 week supernumerary period there are further opportunities for support in practice from the NNeTS Clinical Educator, this can be utilised by offering additional teaching on the ward or being accompanied on neonatal transfers.

There are positive resource implications as this guidance allows extension of the current limited scope of nurse delivered transport and so will allow NNeTS to respond more flexibly and responsively to regional needs and focus ANNP/medic resources where required.

Monitoring Section

NNeTS review all transports within 12-72 hours of completion as a matter of course. Any transports which come under this guidance will therefore be clinically reviewed as part of the usual governance processes. If any transports are thought to have been either carried out in contravention of this guidance or from incorrect application of this guideline, the review process will examine the case in more detail. Where necessary an investigation will be conducted and feedback provided through the established risk and governance processes.

Appendix 1

Categories of Care 2011

INTENSIVE CARE

General principle
This is care provided for babies who are the most unwell or unstable and have the greatest needs in relation to staff skills and staff to patient ratios.

Definition of Intensive Care Day
- Any day where a baby receives any form of mechanical respiratory support via a tracheal tube
- **BOTH** non-invasive ventilation (e.g. nasal CPAP, SIPAP, BIPAP, vapotherm) and PN
- Day of surgery (including laser therapy for ROP)
- Day of death
- Any day receiving any of the following
    - Presence of an umbilical arterial line
    - Presence of an umbilical venous line
    - Presence of a peripheral arterial line
    - Insulin infusion
    - Presence of a chest drain
    - Exchange transfusion
    - Therapeutic hypothermia
    - Prostaglandin infusion
    - Presence of replogle tube
    - Presence of epidural catheter
    - Presence of silo for gastroschisis
    - Presence of external ventricular drain
    - Dialysis (any type)

HIGH DEPENDENCY CARE

General principle
This is care provided for babies who require highly skilled staff but where the ratio of nurse to patient is less than intensive care.

Definition of High Dependency Care Day
Any day where a baby does not fulfill the criteria for intensive care where any of the following apply:
- Any day where a baby receives any form of non invasive respiratory support (e.g. nasal CPAP, SIPAP, BIPAP, HHFNC)
- Any day receiving any of the following:
    - parenteral nutrition
    - continuous infusion of drugs (except prostaglandin &/or insulin)
    - presence of a central venous or long line (PICC)
    - presence of a tracheostomy
    - presence of a urethral or suprapubic catheter

- presence of trans-anastomotic tube following oesophageal atresia repair
- presence of NP airway/nasal stent
- observation of seizures / CF monitoring
- barrier nursing
- ventricular tap

SPECIAL CARE

General principle

Special care is provided for babies who require additional care delivered by the neonatal service but do not require either Intensive or High Dependency care.

Definition of Special Care Day

- Any day where a baby does not fulfill the criteria for intensive or high dependency care and requires any of the following:
  - oxygen by nasal cannula
  - feeding by nasogastric, jejunal tube or gastrostomy
  - continuous physiological monitoring (excluding apnoea monitors only)
  - care of a stoma
  - presence of IV cannula
  - baby receiving phototherapy
  - special observation of physiological variables at least 4 hourly

TRANSITIONAL CARE

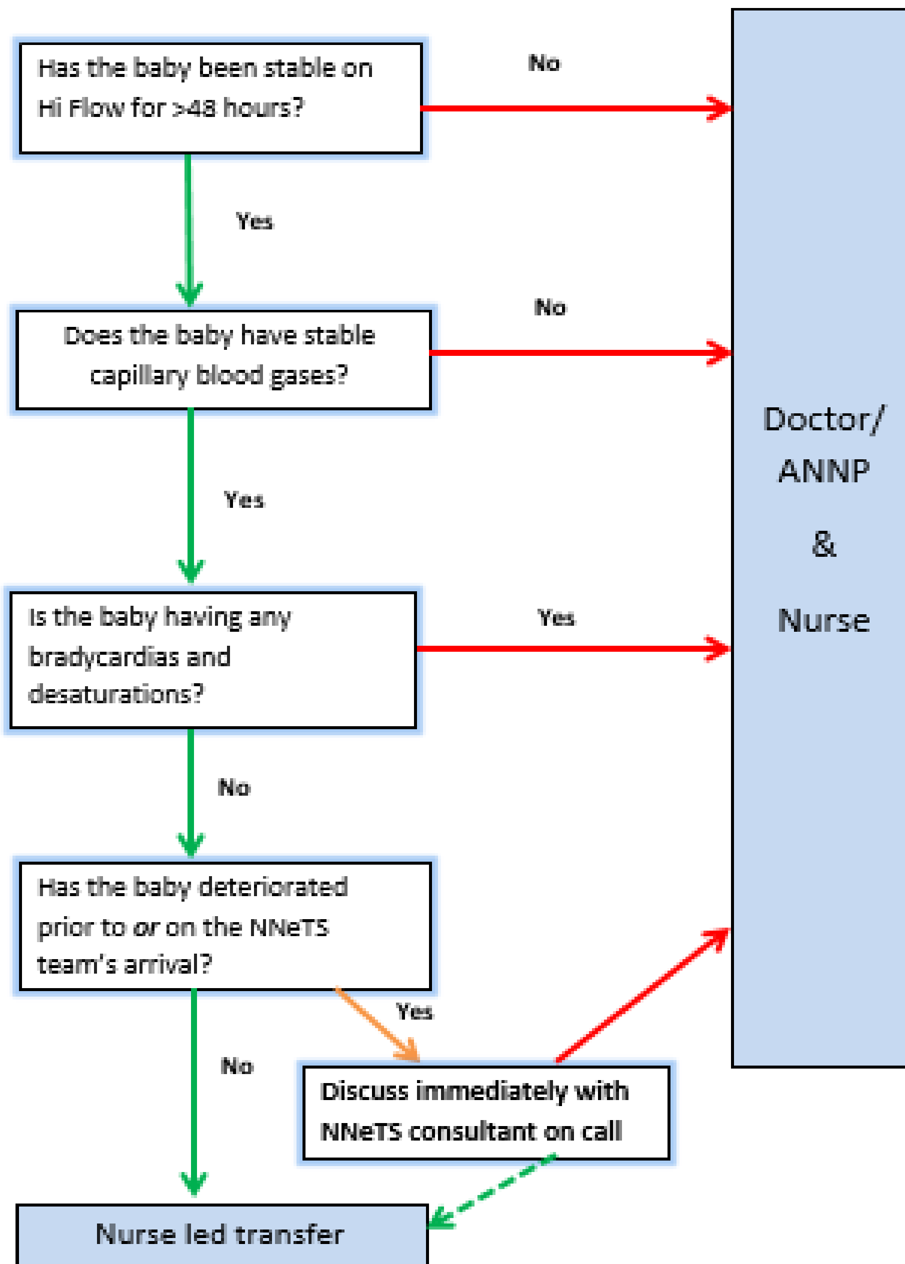
General principle

Transitional care can be delivered in two service models, within a dedicated transitional care ward or within a postnatal ward. In either case the mother **must be resident with her baby and providing care**. Care above that needed normally is provided by the mother with support from a midwife/healthcare professional who needs no specialist neonatal training. Examples include low birth-weight babies, babies who are on a stable reducing programme of opiate withdrawal for Neonatal Abstinence Syndrome and babies requiring a specific treatment that can be administered on a post-natal ward, such as antibiotics or phototherapy.

Appendix 2

Decision tool for Nurse-Led HFNC transfer

Moving a baby requiring Hi Flow from a Level 3 to a Level 3: Nurse only or with Doctor/ANNP



References

1. Kent. S (2018) Use of high flow nasal cannula (HFNC) therapy during neonatal transfer. ANTS (Acute Neonatal Transfer Team) Cambridge University Hospitals NHS Foundation Trust.
2. Whiston, J and Harness, C (2020) Embrace Guideline for Nurse Delivered Transfers: CPAP and High Flow therapy. Sheffield Children's (NHS) Foundation Trust.
3. Modi (2011) Categories of Care 2011, A BAPM Framework for Practice. British Association of Perinatal Medicine
4. Goel. N et al (2016) Use of high flow during neonatal transfers. Available at www.walesneonatalnetwork.wales.nhs.uk
5. Cheema et al (2007) Planned neonatal transfers by a centralised nurse –led team. *Infant Journal*, 3 (3).