NNeTS SOP

Title: General Northern Neonatal Transport Service SOP

Contents

1. Introduction

1.1. This document outlines the framework within which the Northern Neonatal Transport Team (NNeTS) outlines the modes and scope of operation of the service.

1.2. NNeTS is a regional neonatal transport team which has been commissioned by the Northern Neonatal Network on behalf of NHS England to address the need for a single neonatal transport service serving the North East of England as outlined in the report by the RCPCH team led by Professor David Field in 2015 (for NHS England). The team is hosted by Newcastle upon Tyne Hospitals NHS Trust (NuTH) and team members are employed by the Trust. The team is co-located with the Neonatal Intensive Care Unit (Ward 35) at the Royal Victoria Infirmary, Newcastle.

2. Principles

2.1. All individuals working for NNeTS are required to be aware of and work within the clinical governance structure of NuTH. NNeTS governance processes will also link into the defined governance processes of the Northern Neonatal Network, including annual publication of a NNeTS report to the Network Board.

2.2. The service aims to meet the service specifications set out in the CRG Neonatal Transport service specifications document (NHS England, 2014) and the standards set by the BAPM for specialist neonatal transport services. NNeTS submits data nationally to the Neonatal Transport Group (NTG, formerly Transport interest Group, TIG) benchmarking performance against these standards and the other Neonatal Transport services around the UK.

2.3. NNeTS aims to provide high quality neonatal care for infants and their families from the first point of contact, through transport, to arrival at the destination unit. NNeTS provides:

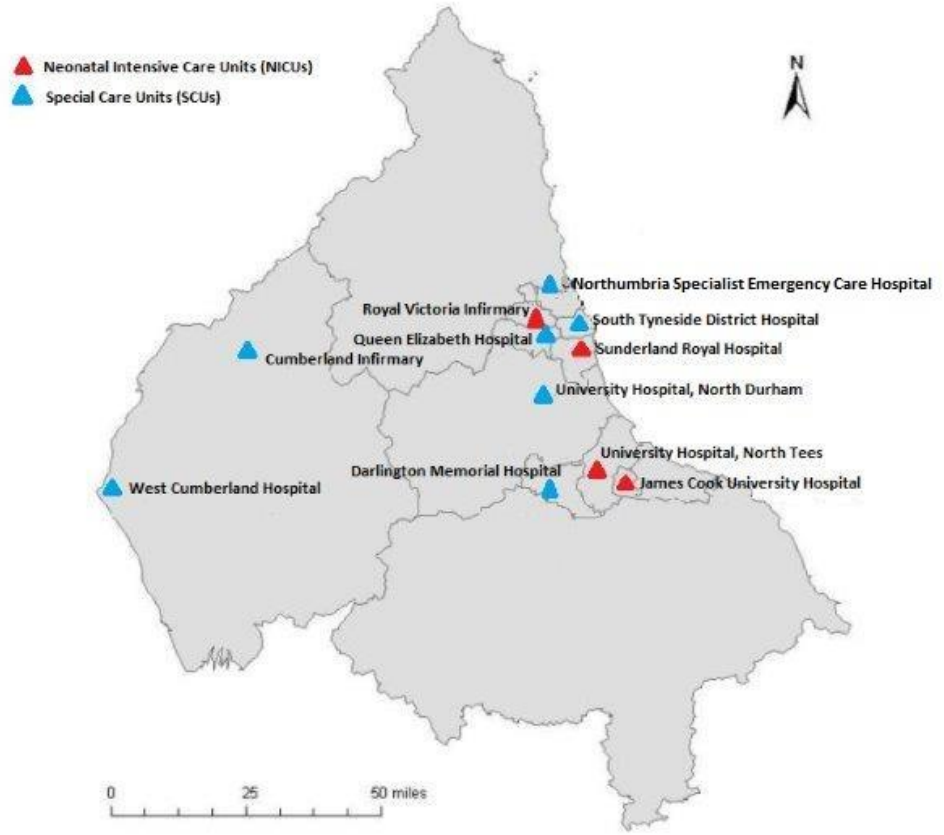
- A single point of telephone contact for referring clinicians 24 hours a day.
- Access to specialist Consultant neonatologist advice 24 hours a day.
- Triage of requests for transport to an appropriate level of transport provision and dispatch of a NNeTS teams within a clinically appropriate time window (as per BAPM standards).
- Support for high-risk obstetric transfers by locating a suitable maternal bed and neonatal cot (in-utero transfer requests) and linking obstetricians in the referring and receiving centres
- Identification of a suitable cot within the region so that the most appropriate care is provided in the most appropriate location for any baby requiring specialist care in the Northern region
- Neonatal transfers carried out in a way that maximises patient safety, comfort and dignity whilst minimising patient pain, discomfort, or distress.
- Consideration of the needs of parents/guardians and facilitation, where possible, to avoid separation of babies from their parents in transport.
- Appropriate communication between all parties to ensure the efficient and effective continuity of patient care.

3. Scope of care

3.1. NNeTS serves the babies born within the catchment of the Northern Neonatal Network. The Northern Neonatal Network is one of the 11 Operational Delivery Networks in England. Its aims are:

- To provide a safe, high quality service for special neonatal care workloads across the network region, and seek to improve outcomes for all babies born and cared for within it
- To maintain a framework for demonstrating the attainment of minimum quality standards, the implementation of continuous quality improvement, and adequate risk management in special and intensive neonatal care across the region
- In collaboration with the Region's Specialist Commissioners at NHS England, to agree the appropriate allocation of capital and revenue for neonatal care across the Network.

The Northern Neonatal Network is the largest of the neonatal networks in England in terms of geographical area covered. It stretches from the borders of Cumbria and Northumberland down past the Tees valley into North Yorkshire, where it borders the Yorkshire & Humber Neonatal Network. There are a total of 11 units within the Network. Four of these are designated as Level 3 or Neonatal Intensive Care (NICU), and seven are designated as Level 1 or Special Care Baby Units (SCBUs). The eleven units working collaboratively with the Network to cater for a population of over 3 million people and an annual birth rate of approximately 35,000. It covers all Local Authorities in the North East and North Cumbria and care is provided on the 11 sites by nine different NHS Foundation/Acute Hospital Trusts.



NNeTS provides the Neonatal Transport services within the Network, *including* (but not limited to) the transfer of:

- All newborn infants whose mothers were booked for delivery within the Network.
- Acute uplift for intensive care.
- Transfer for specialist opinion, investigation or treatment in regional or supra-regional centres.
- Repatriation to their base units within the Network.
- babies from a neonatal unit within the network for palliative or end of life care, at hospice or home, when appropriate and feasible.

3.2. Exclusions

NNeTS is primarily a transport service and the responsibility for immediate and initial stabilisation of a critically unwell baby rests with the referring team. NNeTS does not have provision to dispatch either a resuscitation or stabilisation team in response to a neonatal emergency. Trusts with Midwifery Led Unit (MLUs) satellites to their main obstetric centres need to have local agreements and pathways in place to provide emergency neonatal care at the MLUs, should it be required (Neonatal Support for Stand Alone Midwifery Led Units (MLUs): A Framework for Practice, British Association of Perinatal Medicine, May 2011). Clinical advice on emergency treatment can be obtained by contacting NNeTS by telephone.

NNeTS will **not** be responsible for the transfer of the following patient groups (i.e. exclusion criteria precluding NNeTS transport):

- >6kg weight
- >6m old (corrected age)
- 'Non-neonatal'-scope of illness or reason for transfer (e.g. fulminant meningococcal sepsis or polytrauma)

As routine, NNeTS does not provide:

- Intra-hospital transfers of patients except in exceptional circumstances.

Rarely, time critical transfers for **immediate** lifesaving treatment (e.g. balloon atrial septostomy) **where it is deemed** that the referring hospital will be able to transfer more quickly ***and*** that this non-specialist transfer **will** result in significant clinical benefit may be appropriate. These should be discussed immediately with the NNeTS consultant as moving these babies using a NNeTS team *may well* still be the most clinically appropriate option but requires a Consultant-level discussion to weigh up the risk/benefit of waiting for the team to arrive.

NNeTS recognises that in exceptional circumstances the service may be able to provide extra-ordinary support to clinical teams across the region and a subsequent NNeTS transfer may be appropriate in some of the above situations. The decision to extend this support rests with the Consultant covering the NNeTS service at the time of referral, and depends on both the ongoing NNeTS workload and the availability of local or other non-neonatal transfer capability.

4. Referral

4.1. To request a transfer the referring hospital is required to make a telephone request to NNeTS. Referrals will be accepted from:

- Obstetric services for maternal bed and co-located neonatal cot availability (if required)*
- Neonatal services for all transfers
- Paediatric services across the region for transfers of babies with neonatal-type illnesses (where the baby meets the age/weight criteria)

*These in utero transfers will be undertaken by the North East Ambulance Service (NEAS) and are outside of the scope of provision of patient transport by the NNeTS clinical team.

4.2. Acute referrals will be dealt with by the following procedure:

- NNeTS administrator (office hours) or NNeTS nurse (out of hours) records contact details of referring clinician and patient demographics in NNeTS referral record book.
- Call conferenced or passed onto NNeTS nursing or medical staff depending on time of day and nature of referral.
- Clinical details presented by referring clinician and recorded by NNeTS team member in NNeTS referral record book.
- Clinical advice provided by NNeTS team member as required.
- NNeTS team contact receiving units and confirm location of cot to receive baby
- Receiving (usually NICU) centre Consultant call conferenced
- Clinical details summarised by NNeTS team member.
- Further questions and clarifications on clinical status of patient as required
- Additional clinical specialists can be added to the call conference as required.
- Plan agreed for clinical stabilisation and transfer of patient (if required).
- Dispatch of NNeTS team can occur at any point in the referral call, for example if early conversation suggests a time-critical situation and the NNeTS Consultant is able to provide ongoing advice by telephone

5. Triage and Medical control

5.1. The decision to dispatch a NNeTS Team is based upon the clinical information provided by the referring unit. This decision takes into account the ongoing NNeTS workload at the time of referral and the relative priority of the request (with reference to the Transfer Category Priority List: see appendix A).

5.2. All decisions will be clearly documented as part of the NNeTS clinical record. NNeTS will also eventually ensure that all conference calls will be digitally recorded and stored according to the Data Protection Act.

5.3. The Consultant with responsibility for NNeTS at the time of receipt of a referral will decide upon the appropriate composition for the responding NNeTS team based upon the clinical information available and their own knowledge of the competencies of staff on duty. NNeTS teams will be made up of a combination from the following:

- Doctor (NuTH Speciality Doctor, Neonatal Higher Specialist Trainee, Paediatric Specialist Trainee, Clinical Fellow)
- Transport (Advanced Neonatal) Nurse Practitioner
- Specialist Transport Nurse

5.4. Where clinically indicated, transport episodes may be Consultant delivered though this is not a common occurrence. Senior grades of non-Consultant doctors will more often be delivering the clinical care in transport for the majority of cases (particularly acute uplift)
5.5. Teams may be defined as either 'nurse-led' or 'medic-led'.

- A medic-led team will contain a NNeTS Doctor or Transport Nurse Practitioner (TNP).
- A nurse-led transport is delivered by NNeTS Specialist Transport Nurse(s) (e.g. repatriations)

5.6. When the Consultant responsible for the NNeTS team is not immediately available to provide triage and medical oversight/support to the team (for example due to giving direct clinical care to a critically ill patient) the following set of criteria applies before a transport is accepted and the team dispatched:

- The non-Consultant doctor/TNP/specialist transport nurse should decide for themselves whether they have sufficient competence and experience to undertake the transport based upon the clinical information provided.
- If they consider themselves not to have the appropriate level of experience and competence this must be communicated to the Consultant covering NNeTS if at all possible.
- If appropriate and unavoidable (by means of the NNeTS Consultant being unavailable), the referring and/or receiving unit Consultant (whichever is most appropriate to the task at hand) should be available for advice and to support the NNeTS staff in the transport.
- As the team are unlikely to leave without a destination cot confirmed, the most likely appropriate source of advice in lieu of the NNeTS Consultant will be the receiving unit Consultant.
- Arrangements for the transport must be confirmed with the on-call NNeTS Consultant at the earliest opportunity.

5.7. In circumstances when additional clinical personal may need to be added to the NNeTS Team to ensure patient safety, such as an off-duty NNeTS doctor or Consultant from the referring or receiving hospital with specific skills, the request for assistance would normally come from the on-call NNeTS Consultant and transport to the required location coordinated by NNeTS.

5.8. When a NNeTS Team is not immediately available due to clinical demand, transport requests will be prioritised according to the NNeTS Transfer Category Priority List (see appendix A). In addition:

- Patients referred from hospitals within the Network catchment will be prioritised. If the patient referral is from an out of region hospital, they will be asked to refer to the appropriate local service.
- The length of wait until a team becomes available will be assessed.
- Discussion will take place between the on-call NNeTS Consultant and/or Lead Nurse and a Consultant at the referring hospital and receiving hospital and a clinical decision will be made either to:
    - Wait until the NNeTS team is available
    - Ask the referring hospital to transfer
    - Ask another transport service to transfer

When ambulances are booked, the speed of response asked for from NEAS will vary depending on the agreed category of priority of the referral (see section 8).

6. Advice calls

6.1. Advice calls may form part of the transport process or be independent of any request for transfer.

6.2. Advice will only be given by a member of the NNeTS Team when it falls into their area of expertise. This area will vary according to the team member's background and experience.

6.3. Advice calls will be directed by the NNeTS administrator and conferenced through to a suitable clinician. A member of the NNeTS Team will normally be party to these conversations through call conferencing when available as the facilitator for obtaining advice but not necessarily as the provider of that advice.

6.4. The clinicians giving advice are responsible for their advice, accepting that it is based upon the information provided to them, but they cannot insist that such advice is acted upon. Any advice received by the NNeTS team must be documented in the baby's transport clinical record. Advice may come from a:

- NNeTS clinician
- NICU clinician from the receiving unit
- member of a specialist team from the receiving unit (e.g. surgery or cardiology)
- third party specialist clinician (e.g. Consultant from a tertiary centre) who would otherwise have no direct responsibility to the patient*

*Specifically this must be requested by the NNeTS consultant

7. Responsibility Arrangements during the transport process

7.1. Introduction

Transfer of patients by NNeTS necessitates that the care of patients is handed over from the referring hospital to the Transport Team, and then from the Transport Team to the receiving hospital. Recognition and acknowledgement that there is not a sudden change in responsibility for the patient's care, but that this shifts dynamically during the transfer process, is central to understanding that the patient's best interests must remain paramount throughout. Understanding the changing responsibilities existing at different time points within the process is also important in ensuring that a cooperative approach is achieved across the three or more teams of clinicians involved in a transfer.

7.2. From referral to handover

The patient remains the sole responsibility of the referring hospital team (and Consultant) until the timepoint when an adequate verbal handover of the patient to the NNeTS Team has been completed. This can only take place once the NNeTS Team has arrived at the patient's bedside.

While awaiting the arrival of the NNeTS Team the referring hospital team may be given advice from the NNeTS Consultant or a third party (such as the receiving unit/other specialist clinician). However, they remain solely responsible for providing adequate information upon which that advice is obtained and for the consequences of deciding whether or not to act in accordance with that advice.

7.3. From handover by the referring hospital team to departure.

On completion of handover at the referring hospital the NNeTS Team will assume joint responsibility for the management of the patient with the referring team Consultant. The

NNeTS Consultant on duty will assume ultimate responsibility for the patient when the Transport Team *departs* the referring hospital with the patient.

The referring hospital Consultant(s) and team must not abdicate from their ongoing responsibility for the patient (to the NNeTS Team) immediately after handover. The referring unit Consultant(s) and other responsible staff within the referring hospital should render to the NNeTS Team any assistance necessary to enable the safe preparation of the patient for transfer.

If there is any clinical disagreement between teams regarding how to proceed at this point (with, for example, the sickest patients) it is the duty of the NNeTS team staff present to ensure that they communicate with the NNeTS Consultant on call immediately. They should always ask the referring hospital Consultant to engage in a conference call with the NNeTS Consultant on call in order to jointly agree a way forward in the baby's best interests. Service users, by implication, agree to this responsibility when approaching NNeTS with a transport request.

Ultimately the decision to transport a baby rests with the NNeTS team about to undertake the transport. Transport may be declined based on:

- Change in clinical condition between referral and arrival *or* after a move into the transport incubator, such that the transport would be unsafe or inappropriate *to the point of not being in the baby's best interests* (e.g. clinical deterioration requiring significantly more support prior to transfer for an *elective* assessment or treatment)

  OR

- If the change in clinical condition means the receiving centre would not now be the appropriate destination with respect to level of care for the baby (e.g. a baby for repatriation deteriorates to point of requiring respiratory support thus cannot return to a level 1 unit).

During this first phase of shared care, the Consultant from the designated receiving unit/specialist service may also be usefully conferenced into discussions regarding the ongoing treatment of the baby, if required, to:

- Help resolve pragmatically any disagreement between the referring team and the NNeTS team (including the NNeTS Consultant) about appropriateness of transfer
- Ensure treatment optimisation during the transport episode until arrival in the 3°/4° centre (which may require them to formally assume responsibility for care delivered in a shared capacity with the NNeTS Consultant, or if appropriate to assume full responsibility for the treatment delivered in transport)

Examples:

- Involvement of the receiving NICU consultant to decide whether to move a severely encephalopathic and acidotic baby for cooling vs. instituting palliative/end of life care locally where there is disagreement between the NNeTS service and local staff
- Liaison during the shared care phase and during transport with a cardiac PICU intensivist for advice regarding ongoing management in transport of a baby to an ECMO centre, *including* responding to changes and seeking advice while travelling

It is also accepted best practice that the NNeTS team involve the receiving centre's Consultant *pre-departure* if there is a decision about ongoing care (during transport) which is dependent on the facilities/team to which the baby is being transferred.

7.4. During transfer

During the transfer of a patient from the place of care in the referring hospital until arrival at the place of care in the receiving hospital, NNeTS is solely responsible for the patient's care. The NNeTS Consultant on duty is ultimately responsible for the patient during the transfer. This line of responsibility is maintained despite a lack of physical proximity.

During this time the NNeTS Team may act upon advice from a third party (e.g. from the receiving unit/other specialist clinician) but is responsible for providing adequate information upon which that advice is obtained and for deciding whether or not to act in accordance with the advice.

The **only** (and very rare) exception to the NNeTS Consultant having overall responsibility for the ongoing transport is when, by confirmed and documented agreement between parties, the NNeTS Consultant on call cedes overall responsibility for the transport to another Consultant with the agreement of the NNeTS team on the road (for example an ECMO or PICU Consultant in the receiving centre).

In reality, the majority of transports where this may present as an issue (a tiny minority of total transports) will be managed with the responsibility for the transport resting with the NNeTS Consultant utilising varying degrees of input from the receiving Consultant and a shared-responsibility model of care delivery.

7.5. Handover in the receiving hospital

The care of the patient remains the NNeTS Team's responsibility until an adequate handover of the patient to the receiving team has been completed. Responsibility for the patient passes completely over to the receiving team once the patient has been transferred off the transport trolley and, where required, stabilised on the receiving team's life support equipment.

It is expected that upon arrival at the receiving hospital, the receiving team would render as required any immediate assistance necessary for the care of the patient. This may take place even before the handover process has been completed.

On rare occasions, additional clinical care by the NNeTS Team may be required (e.g. to facilitate a CT scan on arrival). This should be agreed with the NNeTS Consultant at the earliest opportunity in order to ensure it does not compromise NNeTS ability to respond to higher priority activities. Under these circumstances the primary responsibility for the patient rests with the receiving team. The NNeTS Team will act **solely** as technicians for the safe transfer of the patient using NNeTS equipment.

7.6. Transfers delivered by Transport nurses

The responsibility and accountability arrangements as detailed above continue to apply when transfers are delivered by NNeTS Specialist Transport Nurses acting independently. This is both at referring hospitals, during transfer and at receiving hospitals.

7.7. Transfers delivered by non-Consultant Doctors/Transport Nurse Practitioners.

The responsibility and accountability arrangements continue to apply when transfers are delivered by non-Consultant Doctors/Transport Nurse Practitioners (TNPs) acting independently. Before accepting the responsibility for a patient the non-Consultant Doctor/TNP should independently assess the patient and decide whether or not the transfer of that patient is within their experience and competence. Should they decide that this is not the case, responsibility for care of the patient remains with the referring team until such time as alternative arrangements can be made for NNeTS to enter the period of shared care with a view to transporting the patient e.g. attendance by the NNeTS Consultant on duty or another senior NNeTS transport doctor.

7.8. Patient death before or during transport

NNeTS recognises that at any point during the transport process, from initial contact onwards, the patient's clinical condition may change and palliative or end-of-life care at the referral centre may be appropriate. This decision should be made jointly with the:

- Referring Consultant(s)
- NNeTS Consultant
- Receiving Consultant.

If this occurs while the NNeTS Team are in attendance, responsibility for the patient's care will then move back to the referring hospital Consultant. Again NNeTS recognises that this is a dynamic process but the referring hospital will assume ultimate responsibility for delivery of palliative and/or end-of-life care.

On discussion with the responsible NNeTS Consultant on duty the transport team may remain at the referring hospital to continue shared care with the referring hospital team if it is appropriate, possible, and in the best interests of the baby.

7.9 Patient death or life-threatening deterioration during transport

If a baby is to be moved whilst very unwell or unstable, there may be a real risk of death during the process of transport as the clinical environment in the back of the ambulance applies increased physiological stressors to the patient compared to those experienced in a static cot.

The only clinical justification for moving a baby in extremis is that the definitive treatment required to give any chance of survival is not available in the referring centre (for example surgery for perforation of the bowel, or ECMO). In the event that this possibility arises, the NNeTS team must coordinate discussions about the appropriateness of subsequent transport between the transport team, the referring Consultant, the NNeTS Consultant on duty and (if appropriate) the receiving Consultant (see Section 7.3) before presenting the accepted and agreed plan to the parents jointly (NNeTS team and referring Consultant).

Where this outcome is being considered, there must be frank discussion as to the risks of transfer with the parents (without undue delay in process if the agreed decision is to undertake transport). All such discussions should be fully documented in the transport record.

If deterioration and cardiac arrest occurs during the process of transport, the ambulance must be stopped and resuscitative measures commenced as appropriate and planned. The

Consultant on call for NNeTS must be contacted immediately and involved in the clinical process.

In the event of a successful resuscitation, a decision must be made as to whether to continue to planned destination, return to the referring centre, or divert to a closer unit with suitable facilities for ongoing care.

In the event of failure of return of spontaneous circulation, a decision must be made at what point to stop resuscitation and then to which unit to travel. It would only be *exceptional* circumstances that made it appropriate to attempt to continue resuscitation whilst still travelling as it is usually ineffective. This must be a team decision led by the Consultant on call for NNeTS. For futher guidance on collapse and death during transport, please refer to the detailed NNeTS guidance for this circumstance.

8. Mode of Transport

NNeTS is almost exclusively a land-transfer service. Ground transport vehicles are provided by NEAS for the NNeTS team. Air transport may be provided by HM coastguard (rotary wing) in exceptional circumstances where ground transport would incur a life-threatening delay for the patient: for example an out of region transport for a baby requiring ECMO at the Freeman Hospital.

Ambulances for ground transport are front-line, crewed vehicles that are provided and maintained by the North East Ambulance Service Trust (NEAS). NEAS is responsible for providing drivers trained to the appropriate standard for all types of driving, up to and including emergency response ('blues and twos') through a service level agreement.

The NHS England Neonatal Transport Service Specifications (E08) requires that neonatal transport teams be dispatched from base unit in response to a time-critical referral within 1 hour of the referral telephone call. For *any* uplift or intensive care referral, the transport team should arrive at the patient's cotside within 3.5 hours of the referral call. The clock starts when the referral telephone call begins, or the point during the telephone call when it becomes clear (and is agreed) that a referral for uplift is required (for example where the initial call is for advice). For other transports the BAPM dataset categorises transports based on a decision made as to whether the transport should be completed on the same day (i.e. within 24 hours), or can wait longer than 24 hours.

As NNeTS use NEAS ambulances, appropriate prioritisation needs considered for the call made to NEAS to request an ambulance:

- For *time-critical* transports, an emergency ambulance (8-minute response) must be requested in order to fulfil the 1 hour dispatch time as per NNeTS service specification
- For *non-time critical intensive care transport/uplifts* a request for an emergency ambulance (8-minute response) is required to ensure the team arrives by the patient cotside at any of the regional NICUs/SCBUs within the 3.5 hours to 'arrival by the patient' time, *if* departing from base.
- *For 'same day' transport*, it will most likely be appropriate to seek an urgent ambulance (to arrive within 1 hour; e.g. if moving a repatriation for non-ITU care was vital to free-up capacity in a NICU): if there is significant delay in the ambulance arriving there should be a discussion with the NNeTS Consultant on call and the request upgraded to an emergency response to fulfil the transport.

- *For transfers which can wait >24 hours* (e.g. simple repatriations or planned transfer for surgery), wherever possible, the ambulance should be booked ahead of time or booked on whichever priority is recommended after a discussion with the NEAS control room: NEAS may request that NNeTS ring on the day of transport and ask for a higher than routine priority ambulance. If a same-day vehicle is required it should be booked as either emergency or urgent (as appropriate). As with the other categories above, significant delay should prompt discussion with the NNeTS Consultant regarding upgrade of the request in order to ensure the delay does not compromise the safety and effectiveness of the service

If delay in providing a vehicle compromises an appropriate response to a referral, the NNeTS consultant on call should consider dispatching the clinical team with hand-held equipment bags ahead of the ambulance by other means, in parallel with upgrading the response time to ensure the transport trolley reaches the patient in an appropriate time frame to facilitate the transfer.

9. Equipment

NNeTS uses incubators in a single patient configuration for babies up to 6kgs in weight. Transport of twins in a single episode by road is not routinely undertaken with the current equipment available. All incubators and trolleys are fitted with intravenous infusion pumps, appropriate ventilators, monitors and suction units. Any fault with, or failure of, equipment must be reported to the NNeTS Specialist Nurse Lead (BF) as soon as returned to base. In the case of minor faults, a risk assessment must be completed as to whether the piece of equipment: can continue to be used safely; needs to be removed from use; or whether the whole trolley apparatus needs to be removed from service. Assessment, repair (if appropriate) and maintenance of NNeTS equipment must be carried out by NuTH medical engineering on site (RVI) in the first instance.

Cleaning and decontamination of equipment is by all clinical staff following the Control of Infection Policy. NNeTS must use approved and supplied equipment and consumables under normal working conditions. In exceptional circumstances, where it is in the best interests of the patient, other equipment may be used after discussion with the NNeTS Consultant on duty. A datix form will be completed in these circumstances and reviewed using the established investigation pathway to establish whether the use of a non-NNeTS piece of equipment is a result of deficiency in the service equipment which needs to be remedied.

10. Team members

10.1 Health and wellbeing

Ensuring the health, safety and wellbeing of NNeTS staff is one of the most important principles underpinning the functioning of the service. As outlined in section 4.3, the NNeTS clinical team is inherently multidisciplinary. In addition to those potential team members there listed, at different times within the transport process, there may also be involvement of:

- NNeTS administrators
- NEAS ambulance staff
- Local NICU/SCBU staff (both referring and receiving)

The complete MDT is required in order to deliver timely and appropriate care to any given baby requiring transport in the Network.

The stressful nature of neonatal transport means that at all times, team members should be aware of the impact of the experience of working in transport medicine on their own health and that of their colleagues. NNeTS completes a daily debriefing in the morning at which any concerns can be raised, and the medical/nursing leads can provide additional planned individual or team debriefings if needed.

NuTH Occupational health (based at Regents Point, Gosforth) provide a wellbeing in work course, details of which can be accessed at:
http://nuth-vintranet1:8080/cms/SupportServices/OccupationalHealth/SupportForMentalWellbeing.aspx

Sickness must be reported in line with NuTH guidance and if time away from work is taken, a return to work assessment will be completed where appropriate.

One of the NNeTS Specialist Nurses will be responsible for Health and Safety at Work, and liaise closely with the Health and Safety leads working in the host NICU/directorate.

10.2. Training and education

The NNeTS staff is expected to adhere to the NuTH Mandatory Training Policy, Corporate and Local Induction Policy, and be expected to complete this training at the required intervals in line with host Trust requirements subsequently.

All new staff will undergo specific NNeTS orientation and equipment training against defined competencies. The NNeTS practice development lead is responsible for maintaining and updating the NNeTS team training needs analysis for all staff, against which appropriate training will be provided and which, at annual appraisal, will be used to monitor professional development.

<u>Nursing Staff</u>

Equipment education is assessed against the Competencies in Neonatal Transfers document. Initially nursing staff will be accompanied on transport by the practice development nurse and/or their designated NNeTS mentor. This will then be followed by a period of preceptorship on transfers with established nursing staff. Progress is recorded and monitored by the practice development team, Specialist Nurse Lead and by the individual themselves using a transfer log.

<u>Transport Nurse Practitioners (TNPs)</u>

New TNPs are expected to follow an extended training program which includes:

- Successful completion of the appropriate Degree-level qualification as an advanced nurse practitioner (via Sheffield University currently) then completion of Masters thesis.
- Completion of 6 monthly supervision meetings with their named medical Consultant supervisor (at NNeTS) to ensure satisfactory progress.
- Specific periods of time, to be agreed with their medical supervisor and their line manager (Neonatal Matron in the host Trust), working in a supernumerary position alongside the medical speciality trainees (initially ST 1-3, then ST 4-6) on NICU in the host Trust and on the road with NNeTS to ensure optimal clinical exposure to

neonatal medical care and with the purpose of updating skills and knowledge. As skill levels progress, the TNPs may also take part of a medical rota slot in a non-supernumerary role.
- All TNPs will have a joint annual appraisal between themselves, their NNeTS Consultant supervisor and their line manager, which will then count towards the process of revalidation as laid out by the NMC (UK).

NNeTS Doctors (non-Consultant)

All doctors who participate in transports for NNeTS are expected to adhere to the NuTH Mandatory Training Policy, Corporate and Local Induction Policy, and complete traiing updates as required subsequently by the host Trust.

They will receive a structured induction program at the start of their placement with the host Trust/NNeTS to ensure they have familiarity with the equipment and common transport emergencies. They are also allocated a 'transport buddy' assigned from the senior NNeTS Specialist Nurses cadre and are expected to complete the same equipment competencies as the NNeTS nurses. They will be accompanied by an established NNeTS doctor/Transport Nurse Practitioner on transport for a period of time until they are deemed competent to act independently. Training to enhance skills in advanced procedures can be provided where necessary in conjunction with ongoing education to maintain core transport skills; for example airway management. Progress and competence in transport is part of the structured review these doctors receive during their routine Consultant-led, clinical supervision which leads to assessment annually at ARCP.

As with the TNPs, clinical exposure to advanced neonatal care is also provided to the NNeTS doctors through work on the host Trust NICU.

NuTH Neonatal Consultants with NNeTS role:

All Consultant Neonatologists who have a NNeTS role (such as transport Consultant of the week) will have experience in transport medicine, in providing support and advice to front line staff in the model of service delivery used by NNeTS. All staff are required to keep up to date with relevant policy changes and undergo training on all equipment, resources and modes of transfer if appropriate or required. Training and experience will be recorded by the individual Consultants and discussed at their annual appraisal, in proportion to the part of their clinical role that transport takes up. Any updates or training needs which are identified by the appraisal process will be arranged through and provided by NNeTS.

11. Documentation

- **All calls** concerning individual patients will have basic demographic details recorded in the transport record (currently the red transport book) by NNeTS staff.
- **All calls** will be documented on the appropriate pages in the book and form part of the clinical records for the patient. Where required these will be signed and dated by the individual completing them.
- Documentation of calls received by NNeTS **must be completed regardless** of whether the NNeTS team subsequently moves the baby (i.e. including calls for clinical advice or referrals which are subsequently fulfilled by a different transport service)**.**
- The NNeTS transport form will be completed by the team (including the pre-departure checks, clinical assessment and observations and return checks).

- A signature from the receiving team will be obtained on the transport form to confirm safe transfer and receipt of the patient at the destination.
- The top (white) copy of the transport form will be left with the receiving hospital as part of the clinical patient record, and the carbon copy brought back to NNeTS base to close the transport episode.
- All drugs/infusions should be prescribed and administered in accordance with NNeTS process, and signed by both transport staff (where appropriate) to confirm correct administration.

- **All** untoward incidents and adverse events will be recorded in the patient's transfer notes. In addition a Datix risk management form will be completed and forwarded to the Risk Management Department for investigation.

All notes will be stored in accordance with NuTH requirements and information governance procedures.

12. Patient Identification

- All patients being transferred will have 2 identification bands in place.
- It is the NNeTS nurse's responsibility to identify the patient prior to the delivery of care and transfer by cross referencing bands with medical and nursing notes.
- Patients must an ID band that includes their name, date of birth, NHS number and gender. If NHS number not available the local hospital number should be used.
- Due to skin integrity or sensitivity, ID bands may not be appropriate for some preterm babies; a risk assessment will be undertaken in these cases and patient identification attached to clothes and/or incubator/pod.
- Once at receiving hospital the accepting nurse and NNeTS nurse must check patient ID band with medical and nursing notes.

13. Parents

- Parents will be kept fully informed of all aspects of their baby's care as part of the process of transport. These discussions will be recorded on the transport record.
- Discussions with parents will include (as appropriate):
    - The nature of the condition affecting their child.
    - The reason for transfer.
    - An explanation of the process of transfer and the potential risks.
- No formal written consent for transfer will be taken. In the case that parents refuse transport against the advice of the referring and NNeTS teams, the NNeTS Consultant should be immediately involved in discussions with the referring Consultant to try to resolve the situation.
- In exceptional circumstances, consent may be taken by the NNeTS medic (if suitably trained) for a third party procedure (e.g. ECMO, laparotomy) but **only** after discussion with the NNeTS Consultant on call and the receiving unit duty Consultant.

Parents travelling with their baby

- One parent should be invited to travel with their child as a default position. NNeTS guidance for parents accompanying their baby in the ambulance is in place and circumstances in which it may be not be appropriate for the mother to be the accompanying parent listed therein.

- It should be clearly documented on the transport record that accompanying their baby has been offered to parents and whether this offer was been accepted or not.
- NNeTS are not responsible for the health of the parent accompanying their child. Travel with NNeTS should only be offered if the parent is medically fit to travel. Should a parent become unwell whilst travelling, immediate assistance offered by NNeTS staff will be equivalent to that provided by an ordinary member of the public. It is usual that the NNeTS team will be travelling in a NEAS vehicle with a NEAS crew. The crew may have technician or paramedic rating and as such offer more advanced care to the parent if required and appropriate
- Mothers who have recently given birth, and wish to travel with their child, must have been discharged from in-patient obstetric care and be more than 24 hours post normal vaginal delivery or more than 72 hours post Caesarean section delivery.
- A sample of maternal blood should be obtained for all babies and infants under 4 months of age for whom there is a reasonable expectation of an early transfusion of blood products being required. This is not required if the mother is travelling with their baby to the receiving hospital.

RT August 2017

Appendix A:

Transport Category Prioritisation List

[from NNeTS SOP: Triage of transport referrals and prioritisation of simultaneous referrals]

User note: These categories are intended to aid decision making locally by the NNeTS team when prioritising the dispatch of teams to referring units. Beyond 'Category A (time critical)', the response time required (national standard) does not directly map to a category as individual variation in cases will result in different response times required, though generally speaking the lower the category as outlined below, the less likely a short response time will be required.

The **categories** are hierarchical (i.e. A is higher priority than B etc) but there is no hierarchy *within* categories. To prioritise two or more concurrent referrals within any given category, the prioritisation decision rests with the NNeTS consultant on call and will depend on multiple factors such as the ongoing NNeTS team activity, the location of the referring unit (level of care provided, distance from definitive care) and the relative stability of the patients (including deteriorating course or not etc.).

Category A: (Time critical)†: NNeTS consultant on call should be notified in <u>all</u> cases

- Potential ECMO candidate
- Intestinal perforation
- Neonate or child requiring emergency (life, limb or gut saving) surgery or invasive procedure*
- Life-threatening respiratory or cardiovascular failure not responding to appropriate local management:

  Despite giving appropriate ventilation via endotracheal tube the infant's respiratory status remains unstable or severely compromised by:
  - *persistent unstable pneumothorax despite chest drain*
  - *requiring FiO_2 100%*
  - *arterial oxygen < 5kPa on 2 consecutive blood gas measurements*
  - *pH <7.1 and pCO_2 >9kPa*
  - *persistent mean blood pressure below corrected gestational age, measured on arterial line; if measured with cuff only, there should also be acidosis (pH <7.1)*
- Pulmonary hypertension of the newborn (PPHN) requiring nitric oxide
- Ventilated tracheo-oesophageal fistula/atresia
- Suspected duct-dependent cardiac anomaly **not** responding to alprostadil (prostin)
- Hypoxic ischaemic encephalopathy requiring therapeutic hypothermia ('cooling')
- Gastroschisis or malformation with externalisation of abdominal viscera
- Suspected malrotation/volvulus†*
- Hyperammonaemia/suspected metabolic condition requiring ITU care

†When prioritising more than one category A referral, consideration should be given to the clinical stability of the baby: unstable babies may need moving as highest priority if intervention (e.g. surgery) is the only thing that has a chance to alter outcome, rather than waiting for the local team to stabilise the baby whilst moving a 'stable' category A baby instead.

*In extreme cases in exceptional circumstances, consider one-way transfer by referring hospital team

†*well babies with bilious vomiting alone do NOT require time critical transfer: this only applies to babies where there is a clinical cause to suspect volvulus or malrotation

Category B

- Intubated ventilated neonate any gestation in a SCBU
- Intubated ventilated neonate less than 27 weeks gestation in a LNU

Category C

- Neonate on CPAP in a SCBU
- Emergency transfer between NICUs for specialist care, resource or capacity reasons
- Repatriation to free up capacity in NICU (including babies receiving HDU care)
- Transfer to home or hospice for step down or end of life care
- Neonate requiring **urgent** planned surgery, invasive procedure or **urgent** planned investigation‡ (e.g. PDA ligation, uplift of baby with duct dependent lesion stable on prostin)

‡where the investigation is likely to be important and required to inform diagnosis or progress treatment

Category D

- Transfer of child for specialist ward level care
- Repatriation of a well-baby a SCBU for ongoing care for non-capacity reasons
- Transfer of neonate for outpatient appointment, planned non-urgent intervention, surgery or non-urgent investigation¥

¥where the investigation is desirable but not likely to provide new information/diagnosis and there is a broad time window (days-weeks) within which the investigation could be done AND there is no other safe way to ensure the appointment/investigation can be fulfilled by the referring team