

North West Neonatal Operational Delivery Network
NWNODN SURGICAL REFERRAL PATHWAY FOR ACUTE &
ELECTIVE SURGERY



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Acknowledgement: We would like to acknowledge the collaborative working that has been undertaken across the NWNODN to develop this document and the previous pathways that have been built upon to produce these pathways.

NWNODN Surgical Referral Pathway For Acute and Elective Neonatal Surgery

1 Introduction

This guidance relates to the transfer of babies across the North West Neonatal Operational Delivery Network (NWNODN) for the management of neonatal surgical or other specialist surgical conditions (with the exception of cardiac surgery). It is acknowledged this pathway is subject to capacity within the two network surgical centres.

The guidance should be followed in conjunction with the Antenatal Management pathway, so that where possible the majority of babies with significant congenital abnormalities needing urgent surgical intervention are delivered at appropriate centres.

A key factor in the development of this network guideline is to improve the ease of communication and availability of clinical information, to ensure that a rapid and effective response is provided by all the clinical staff involved. This single network pathway has been developed in response to the formation of one neonatal transport service (Connect North-West) in June 2017 and builds upon work from two previous surgical referral pathways which were in place previously. The NWNODN would like to acknowledge previous work that has been undertaken that has allowed the development of this pathway.

Two pathways are described in this guideline:

1. Acute surgical/ advice referrals pathway
2. Elective surgical referral pathway.

This is an interim surgical pathway that will be audited following implementation and revisited once the neonatal surgical intensive care unit at Alder Hey children's hospital is established.

2 Acute surgical/advice referrals: Principles

The following principles compliment the NWNODN Surgical Pathway for Acute Referral /Advice Calls found on p. 7 of this guideline.

- **All acute postnatal surgical referrals and surgical advice calls should initially be routed via the NW Perinatal Cot Bureau at the outset Tel: 0300 330 9299.** This will ensure all referrals, whether they are for a transfer request or advice, are logged, a conference call set up and a cot location process is initiated in the early phase of referral. Connect North West (CNW), the NWNODN Neonatal transport team, will be made aware of the patient).
- **Conference calling** is an integral part of referral/advice process. The call should include the surgical team (including Consultant Surgeon), nursing & medical staff at the referring and receiving units, bed manager (if applicable) transport team and other specialist staff as required. On occasions when a member of the senior team is not available to participate in the call, a deputy from the speciality/service should be contacted

- All surgical referrals from the following networks will initially be referred by Cot Bureau to the following surgical centres:
 - **Cheshire & Merseyside** (including North Wales, IOM and University Hospital Staffordshire and surrounding locality hospitals): AHCH
 - **Lancashire & South Cumbria**: will be allocated to a surgical centre according to capacity of the two centres at the time of the referral and in line with previous practice around referrals.
 - **Greater Manchester**: MFT/RMCH
- There are three centres within the NWNODN that are designated to provide neonatal surgical care:
 - **Alder Hey Children’s Hospital (AHCH)**
 - **Liverpool Women’s hospital (LWH)**
 - **St Mary’s Hospital (SMH)**
- Care for surgical patients (pre or post operatively) should only be undertaken within these centres. Alder Hey Children’s Hospital and Liverpool Women’s hospital are soon to form part of one single surgical service.
- Referrals from Local Neonatal Units (LNUS) for the conservative management of Necrotising Enterocolitis (NEC) should only be transferred to a Neonatal Intensive Care Unit (NICU) which has supporting surgical expertise.
- **Interim surgical advice**: whilst the process of locating a cot is underway the referring neonatal unit will obtain surgical advice for the infant from the Consultant surgeon at the surgical unit the baby is first referred to (regardless of whether or not they can provide a cot). For the purpose of this document the surgeon providing interim advice will be referred to as the ‘parent’ Consultant Surgeon.
- **X-ray advice**: Surgeons will not provide reporting/interpretation of x-rays. Surgical colleagues may wish to review x-rays when they are offering clinical advice but this is not to be confused with radiology reporting.
- Attempts will be made at all times to keep an infant’s care within the NWNODN. On the rare occasions when no surgical cot is available within the NWNODN, the Transport Consultant or deputy and the ‘parent ‘ surgical Consultant must be informed of the situation, before surgical centres outside of the network are contacted. Only once they are both aware and no cot is available will cot bureau contact surgical centres outside of the NWNODN.
- All out of network transfers will be reported as an ‘Exception’ through the NWNODN governing processes.
- When patients are transferred outside of the NWNODN for surgical care due to a lack of capacity within the ODN a direct conversation will take place between the referring neonatal unit, surgical team providing interim surgical advice (parent Consultant surgeon) and the receiving unit.

- For emergency transfers* where a cot is not found within one hour of the initial referral call to cot bureau, a second conference call will be arranged to review progress being made.

***Emergency transfers are defined as:**

- Suspected malrotation with volvulus
 - Acutely deteriorating surgical patient (e.g. with NEC)
 - Suspected intestinal perforation
 - Ventilated oesophageal atresia/TOF
-
- **Park and ride transfers** will not be undertaken by Connect North West. An appropriately staffed bed must be available to admit the patient into on arrival at the receiving hospital. A bed must also be available following the surgical procedure/review.
 - For further clarification and information on transfers the neonatal transport team will undertake and stay with the infant during the appointment please see CNW 'Neonatal Out Patient's Appointments' guideline Appendix B.
 - **Governance:** Auditing of the surgical pathway will continue and exception reports will be generated when deviations from the pathway occur, for example transfer out of the network due to lack of capacity. Network surgical data will be reviewed quarterly as part of the NWNODN data collection processes.
 - **Parents/families:** it is the responsibility of all healthcare professionals to keep parents/families informed and up-dated on their infant's care.

NWNODN Surgical Pathway for Acute Referral /Advice Calls

Call North West Perinatal Cot Bureau: 0300 330 9299
Patient details, reason for referral and referrers name and phone number taken. NW Cot Bureau will set up a conference call & locate a surgical bed for the patient

Conference call with Surgical Consultant, NICU Consultant, Transport Team (CNW) and Referring Consultant & bed Manager (if applicable).

ADVICE CALL/ IMMEDIATE ADMISSION NOT REQUIRED

Arrange semi-elective admission if deemed necessary.
 Advice given: told to call back if the infant's condition changes

**ADMISSION REQUIRED:
 NO COT AVAILABLE IN NEAREST SURGICAL CENTRE**

Interim Surgical advice to be sought by referring unit from the 'Parent Consultant' Surgeon, during this process of locating a cot

**ADMISSION REQUIRED:
 COT AVAILABLE**

Cot confirmed at receiving hospital.
 Timing and place of transfer agreed.
 Appropriate transport team deployed

NO SURGICAL COT IN GM → contact C&M Network

- NO appropriate cot available in NICU SMH
- NO appropriate cot available in PICU RMCH (infants >2Kg).

COT BUREAU ARRANGE CONFERENCE CALL with AHCH and/or LWH surgical & NICU teams, bed manager & CNW to find a surgical cot in C&M.

NO SURGICAL COT in C&M

Transport Consultant & RMCH/St Marys Surgical Consultant (parent Consultant) MUST be informed no cot within network before referral outside of the NWNODN.

Surgical cot available within C&M.
Transfer arranged through Cot Bureau.

NO SURGICAL COT IN C&M → contact GM Network

NO appropriate cot available in NICU LWH
 NO appropriate cot available in AHCH

COT BUREAU ARRANGE CONFERENCE CALL with SMH/RMCH surgical & NICU teams & CNW to find a surgical cot in GM.

Surgical cot available within GM.
Transfer arranged through Cot Bureau

NO SURGICAL COT in GM

Transport Consultant, LWH & /or AHCH Surgical Consultant (parent Consultant) MUST be informed no cot within network before referral outside of the NWNODN.

3 Elective Transfers for Surgical Conditions

The following principles compliment the NWNODN Elective Surgical Referral Pathway found on p. 9 of this guideline:

- A named Consultant Surgeon will be allocated to each patient.
- Planned elective surgery should always be scheduled on planned elective list.
- Elective cases should be referred well in advance directly to the surgical team, using the standard NWNODN Elective Surgical Referral Form (*p10*). A further assessment should be performed around 1 week prior to the provisional admission date to ensure that the child remains suitable for admission.
- The surgical team must be informed of any baby who is likely to be discharged home prior to surgery.
- All discharge planning should be undertaken by the referring neonatal unit prior to transfer for surgery, to allow for direct discharge home from the surgical centre if deemed appropriate.
- Babies with complex needs will be transferred back to referring NNU prior to discharge and a bed kept available for them.
- In circumstances where surgery is cancelled a conversation should take place between the referring Consultant Neonatologist and the Consultant Surgeon to develop a plan of care, which may include discharge home prior to surgery, if deemed clinically appropriate.
- Delays or cancellations in elective surgery will be reported as NWNODN Exception.

4. NWNODN Elective Surgical Referral Pathway: St Mary's & AHCH

4.1 St Marys Pathway for Elective Surgical Referral

Referring Unit:

- Identify patient for elective procedure at point of diagnosis ideally 6 weeks in advance
- Standard referral proforma completed and faxed to surgical team
- Inform SMH NICU via Surgical / Pathway Coordinator *Tel 0161 701 9426*

Surgical / NICU Team:

- Referral reviewed and provisional theatre slot booked
 - Surgical / Pathway Coordinator liaises with referring unit with date for surgery



Surgical / NICU Team:

- Surgical / Pathway Coordinator contact referring unit 1 week prior to admission to complete pre-admission checklist
- Information shared with NICU Consultant & Coordinator / Surgeon / Anaesthetist
Admission date confirmed and Cot Bureau informed by LNU



Transport Team:

- Arrange transfer for day prior to procedure

Referring Unit:

- Confirm that a cot will remain available for repatriation on Day 1 Postop

Surgical / NICU Team:

- Prepare for admission, undertake procedure and contact referring unit with anticipated date and time of repatriation or discharge home *all discharge plans must be arranged by LNU. i.e. DPM Medications feeds Outreach/HV teams*
- Follow up arrangements organised.

4.2 St Marys Referral for Elective Surgical Procedure Form



**Surgical Booking Team
Newborn Intensive Care Unit
Saint Mary's Hospital
Oxford Road
Manchester
M13 9WL**

**Specialist Surgical Nurse
Bleep:
Neonatal Pathway Co-Ordinator
Tel: 0161 901 9426
Fax: 0161 276 6536**

| | | | |
|---------------------------------------|-------|---------------------------|----|
| Referring unit | | | |
| Contact number | | | |
| Name / Designation of Referrer | | | |
| Patient Name <i>Block Capitals</i> | | | |
| NHS Number | ----- | Planned date of discharge | |
| DOB | | Time of birth | |
| Gestation | | Corrected Gestation | |
| Birth Weight | | Current Weight | |
| Infection status | | Mode of delivery | |
| Bed type Required Please Circle | ITU | HDU | SC |
| Diagnosis | | | |
| Previous Surgical procedure | | | |
| Respiratory Status | | | |
| Mothers Name | | Tel: | |
| Home address | | | |
| GP Name | | Tel: | |

4.3 Alder Hey Children's Hospital Elective Surgical Referrals

Elective surgical referrals into AHCH are arranged via the surgeon's secretary.

The Neonatal Surgeon of the Week (NSOTW) co-ordinates surgical patients coming into AHCH. The NSOTW has a mobile and bleep which can be accessed through AH switchboard: 0151 228 4811

Direct telephone number for the Neonatal Surgical Unit: 0151 252 5378

Appendix 1: Connect North West Outpatient Appointment Guideline

Introduction

Connect North West (Connect NW) will undertake outpatient appointments for neonates who are current inpatients on the neonatal units in Cheshire and Mersey, Greater Manchester, Lancashire and South Cumbria.

Appointments that are to take place in the outpatient department will be considered for babies who require a short assessment time and no secondary procedure is likely to be needed. Day case transfers or short term admission to neonatal units or paediatric wards may be required where babies are, or could become, clinically unstable as a result of the procedure. Long or multiple appointments and/or where there is the possibility that the result may require further intervention such as surgery, will also require admission.

Classification of outpatient appointments routinely undertaken by Connect NW are listed in Appendices A, B and C. The list is not exhaustive and is intended to provide guidance on how best to safely manage appointments. The Transport Team have ultimate responsibility for assessing if the infant is suitable for transfer and where the appointment should take place. Further discussion and advice regarding individual transfers can be sought from the transport ANNP's, Lead Nurse and Transport Consultant.

1. Purpose

The purpose of this guideline is to ensure that the **neonate is transferred to an appropriate location to safely undergo the necessary appointment as part of the ongoing treatment plan.**

2. Roles and Responsibilities

Connect NW Lead Consultant and Lead Nurse have delegated responsibility for:

- Ensuring that guidelines are implemented according to the agreed process.
- Ensuring that the effectiveness of the guideline is monitored
- Reviewing current risk assessments, control measures, procedures and training within the neonatal service to ensure that deficiencies are identified and reported on and that recommendations and action plans are developed and monitored according to the Clinical Effectiveness strategy.
- All Connect NW staff are accountable to the Lead Nurse for implementing, monitoring and evaluating compliance with the guideline.
- Staff and members of the neonatal team are accountable to the appropriate clinical lead to ensure that they comply with the guideline

3. Criteria

| Criteria | Rationale |
|---|--|
| <ul style="list-style-type: none"> Inpatient neonates requiring review/procedures in the outpatient setting (Appendix A), in the neonatal unit (Appendix B) and those requiring admission to a neonatal/paediatric unit as a daycase (Appendix C). | <ul style="list-style-type: none"> To ensure the infant is transferred to an appropriate location to safely undergo the necessary review/procedure. To facilitate the safe transfer of the infant. |

4. Detail of Guideline

| Clinical Action | Rationale |
|--|---|
| <ul style="list-style-type: none"> Requests for outpatient transfers must be submitted through Connect NW Cot Bureau at least 24 hrs prior to the appointment date. | <ul style="list-style-type: none"> To assist Connect NW with the logistics and organisation of the transfer. |
| <ul style="list-style-type: none"> It is the responsibility of the referring Unit to ensure appointments are not booked prior to 10:00am. | <ul style="list-style-type: none"> Due to shift limitations, journey times and ambulance availability, it is not possible for Connect NW Transport Team to arrive at appointments prior to 10:00am |
| <ul style="list-style-type: none"> A detailed history and overview of the infants clinical condition will be discussed with Connect NW Transport Team prior to transfer | <ul style="list-style-type: none"> To assess the suitability of the neonate attending the outpatient appointment. To ensure patient safety. To determine if a cot on the neonatal unit/paediatric ward will be required |
| <ul style="list-style-type: none"> Appointments for infants requiring any form of respiratory support other than low flow nasal cannula, will not take place in the outpatient department and will require a cot for short term admission (See Appendices A and C) | <ul style="list-style-type: none"> To minimise risk and potential deterioration of the infants condition during the appointment/procedure. To ensure access to, and availability of specialist medical equipment/personnel. |
| <ul style="list-style-type: none"> Care of infants during appointments expected to last less than 60 minutes will be managed by Connect NW and infants will be repatriated back to the referral unit (See Appendices A and B) | <ul style="list-style-type: none"> To facilitate timely transfers. To minimise potential risk for infants. To optimise efficiency of the transport service. |
| <ul style="list-style-type: none"> Appointments expected to last more than 60 minutes will be managed as a day case. (See Appendices B and C) | <ul style="list-style-type: none"> To minimise risk for the infant, and manage care in an appropriate setting. |
| <ul style="list-style-type: none"> Care of infants during daycase appointments will be managed by the receiving department staff, following handover by Connect NW Transport Team (See Appendix C) | <ul style="list-style-type: none"> To manage the infants care in an appropriate setting. To ensure the availability of the transport team for Network emergency uplift transfers. To maintain maximum efficiency of the transport service, and facilitate cot availability throughout the Network. |
| <ul style="list-style-type: none"> It is the referring unit's responsibility to ensure that parents are informed that while every effort will be made to attend the appointment, uplift transfer requests will take priority. | <ul style="list-style-type: none"> To facilitate effective communication between referring unit, staff and parents. To minimise parental distress and ensure parents are fully informed prior to transfer |

5. References

6. Associated Trust Documents

'Nurse Led Transfers' (Connect North West 2015)

'Communication with the family in the transport setting' (Connect North West 2014)

'Parents Travelling in the Ambulance' (Connect North West 2015)

'Neonatal Back Transfer to LNU' (Greater Manchester Neonatal Network, North West ODN, Feb 2012, reviewed 2017)

7. Appendices

A:- Appointments eligible for the Out-patient Department

Appointments that are expected to last no longer than 60 mins will be managed by the Transport Team, and the baby will be repatriated to the referring unit following the review.

- Cardiology Clinics, unless on Prostin or high index of suspicion of significant lesion.
- Neurology Clinic/EEG
- ENT Clinic, with no respiratory compromise and not requiring a scope.
- SALT review, which may include Video laryngoscopy if no respiratory compromise
- Orthopaedic Clinic
- Endocrine Clinic
- MRI, dependant on sedation guideline, ensure optimal results with minimum appointment length.
- CT scan

B:- Appointments undertaken on the Neonatal Unit (short term admission)

The Transport Team will remain with the baby for Appointments that are expected to last no longer than 30-60 mins.

- ROP Reviews
- Cardiology Reviews with baby receiving respiratory support greater than low flow nasal cannula

C:- Appointments/Reviews that will require admission to the neonatal/paediatric unit (classified as a daycase)

The transport team will take the infant to the unit/ward, but will not be responsible for the neonates care whilst on the unit. They will hand over care and following investigation/recovery and referral through the cot bureau, will be repatriated to the referring unit.

- Any Urgent investigation where the neonate is still receiving respiratory support ie:- high flow, CPAP, ventilation
- ROP review with the likelihood of surgery/laser treatment.
- Cardiology review/scan when the neonate is receiving Prostin
- Urgent contrast studies
- HIDA scan
- Multiple appointments

Please refer to the Connect NW Guidelines, Policies & Procedures file for generic information on:

- *Roles and Responsibilities*
- *Communication and Documentation*
- *Equality, Diversity and Human Rights Impact Assessment*
- *Consultation, Approval and Ratification Process*
- *Dissemination and Implementation*
- *Monitoring Compliance*