North West London Perinatal Network (NWLPODN) Induction Package
Introduction

This package is for staff working within the 7 NWLPODN hospitals:

➢ To explain how the NWLPODN functions
➢ To show what the NWLPODN has achieved
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What is a Network?

- Managed Clinical Networks developed as a result of recommendations from Department of Health in 2001
- Offer families access to appropriate levels of care as close to home as possible
- Reduces unnecessary transfers to units further away from home to receive intensive care
- Ensure groups of hospitals and neonatal units provide various levels of care locally
Objectives of Managed Clinical Networks

- Ensure babies receive highest quality of care, as close to home as possible
- Help hospitals providing maternity and neonatal care to work together effectively to plan patient care and optimise resources
- Work with commissioners to assess need and ensure sufficient capacity and appropriate infrastructure to support services
- Support development of shared information systems, standardised activity reporting + follow-up data
Objectives of Managed Clinical Networks

- Lead strategic planning of services to implement government policy, national guidance and National Institute for Health and Clinical Excellence (NICE) recommendations
- Ensure providers undertake workforce planning and inform commissioning of education and training programmes
- Develop operational frameworks and implement robust value-for-money financial plans
- Ensure both staff and the families of patients become involved in creating, developing and reviewing the neonatal service
Objectives of Managed Clinical Networks

- Establish tools to gain regular user and patient feedback
- Assess clinical governance risks and work with providers to address areas of concern
- Provide data to benchmark services regionally, nationally and internationally
- Support the performance management function of commissioners
- Facilitate research studies carried out as part of the NIHR portfolio

NHS Toolkit for High Quality Neonatal Services October 2009

NWLPOND March 2015
Transport Services

Norfolk, Suffolk & Cambridgeshire

Beds & Herts

Essex

Kent & Medway

Surrey

Sussex

London

NWLPODN

3
Types of Neonatal Care

- Intensive Care
- High Dependency Care
- Special Care
- Transitional Care
Types of Neonatal Unit

- **Special Care Unit** – Ealing
  - West Middlesex

- **Local Neonatal Unit** – Hillingdon
  - Northwick Park
  - St Mary’s (Imperial)

- **Neonatal Intensive Care Unit**
  - C&W (designated NWLPODN surgical centre)
  - QCCH (Imperial)
Special Care Unit (SCU)

- Provide special care for their own local population
- Depending on arrangements within their own neonatal network they may also provide some high dependency services
- Provide a stabilisation facility for babies who need to be transferred for intensive or high dependency care
- Receive transfers from other network units for continuing special care
Local Neonatal Unit (LNU)

- Provide neonatal care for their own catchment population, except for the sickest babies
- Provide all categories of neonatal care, but transfer babies who require complex or long-term intensive care to a NICU as they are not staffed to provide longer-term intensive care
- The majority of babies over 27 weeks of gestation will receive their full care, including short periods of intensive care, within their Local Neonatal Network
- Some networks have agreed variations in this policy, due to local requirements
- Some LNUs provide high dependency care and short periods of intensive care for their network population
- LNUs may receive transfers from other neonatal services in the network if they fall within their agreed work pattern
Neonatal Intensive Care Unit (NICU)

- Sited alongside specialist obstetric and feto-maternal medicine services
- Provide the whole range of medical neonatal care for their local population, along with additional care for babies and their families referred from the neonatal network
- Many Neonatal Intensive Care Units in England are co-located with neonatal surgery services and other specialised services
- Medical Staff in a NICU should have no clinical responsibilities outside the neonatal and maternity services
Figure 1: Example of a neonatal network organisational structure, showing clinical referral links

Managed clinical network
- Network board
- Network education, CPD
- Common practices

Lead neonatal intensive care unit

Other neonatal intensive care units

Transport

Local neonatal units

Special care units

NHS Toolkit for High Quality Neonatal Services October 2009
Back Transfers

- Mothers can choose where they deliver
- **However** neonatal care occurs according to mother’s postcode
- Networks ensure that the appropriate level of care for the baby occurs in the appropriate hospital
- May mean that babies are born in one hospital and transferred back to another hospital once they no longer require specialist care
- Parents can become very distressed by this and this needs to be explained as early as possible
Parents need to be informed about transferring their baby

- If transfer is appropriate: the need to transfer the baby between units should be raised with the parents ideally antenatally and documented in the notes
- It should also be raised on admission to the neonatal unit if this is not the unit where they will ultimately have care and follow up
- It may be necessary to raise the need for transfer on more than one occasion
- Staff consistency in communication is vital
Parent Information Leaflets are available on the NWLPODN website regarding transfer

http://www.londonneonatalnetwork.org.uk

These can be printed out and given to parents prior to transfer
How will my baby be transferred?

Your baby needs to be taken to another hospital for treatment. This can be a very worrying time for you and your family and this poster aims to show you what is happening to your baby.

Your baby needs treatment at another hospital.

Your baby will be put in a special incubator to be taken to the other hospital.

The incubator is put in a special ambulance to go to the other hospital.

The team looking after your baby will travel with your baby in the ambulance.

On arrival at the new hospital your baby will be taken out of the ambulance, taken to the Neonatal Unit by the same team of Doctors, Nurses and Ambulance Crew.

Your baby will be settled into the new hospital where the treatment he or she needs will happen.
We are aware it may also feel worrying and demanding to have to prepare for a move with your baby, to leave the unit you have come to know and to get to know a new hospital and staff. It is normal to feel anxious at the prospect of your baby moving to a new hospital. You may have questions you want to ask to help you understand the reasons for the move, and what to expect at the new hospital. Some parents find it helpful for staff to arrange a visit to the local unit to meet well ahead of their baby being transferred. The team at the new hospital will receive information on how your baby has been during his/her admission both verbally and in a written letter. Sometimes the transfer of your baby may occur very suddenly or may be cancelled at short notice. This is because the local unit may have an emergency admission or the transport team may be called to care for a sick baby.

**Why can’t my baby stay for the rest of his/ her care?**
Some families express that they would like their baby to stay at the referral hospital for the rest of his / her hospital care rather than being transferred back to the local hospital. Unfortunately this is not possible because just as you and your baby needed specialist care there are other families who are waiting to be transferred for specialist care.
You can be reassured that your baby will only be transferred to a unit providing the appropriate level of care for him / her once this level of specialist care is no longer required.

It is hoped that this leaflet has helped you to understand more about why babies are transferred and how the **North West London Neonatal Operational Delivery Network**

**Please do not hesitate to speak to a member of staff if you require any more information, or wish to discuss any of this information in more detail.**
Parents have told us that they like to write a brief letter to the staff on the new unit telling them about their baby. NWLPODN has a specific letter template for this:
There is a NWLPODN checklist for parents with babies who are to be transferred.

<table>
<thead>
<tr>
<th>Checklist Item</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baby's Name</td>
<td></td>
</tr>
<tr>
<td>Hospital your Baby will be transferring to:</td>
<td></td>
</tr>
<tr>
<td>Now that your baby is transferring to another unit, you may wish to prepare for the move. We have made some suggestions below based on what other parents have found helpful. There may be other things you need that are particular to your baby and your situation and feel free to write those on in the additional spaces provided.</td>
<td></td>
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<tr>
<td>Arrange Visit/Read Leaflet</td>
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<tr>
<td>To prepare for a move to another unit it can be helpful to visit well in advance. Meeting the new staff and learning about the new unit can help you to start to adjust to the move. Staff at your current unit can help you to arrange this. If you are unable to visit, you will find it helpful to read the new unit's general information leaflet. And floor plans available at...........</td>
<td></td>
</tr>
<tr>
<td>Nappies and Cotton Wool</td>
<td></td>
</tr>
<tr>
<td>You may need to buy nappies and cotton wool for your baby.</td>
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<tr>
<td>Handover Letter</td>
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<tr>
<td>You may feel you have knowledge and experiences of your baby that you would like to share with the team at the new unit. It is helpful for the unit to know of their likes and dislikes which may not be in the other correspondence. Please ask the team for a Parent Handover letter which you can complete and have the opportunity to discuss with the staff at the new unit.</td>
<td></td>
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<tr>
<td>Breast Milk</td>
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<tr>
<td>On the day of the transfer remember to take all your breast milk which is stored in the fridge/freezer. It is best to let the unit know how much milk you have to take to make sure they have enough space for it.</td>
<td></td>
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<tr>
<td>New Unit's Telephone Number</td>
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<tr>
<td>Ensure that you have the phone number for the unit you are going to so that you can check your baby has arrived safely and to continue to be able to phone the unit when ever you would like to.</td>
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</tr>
<tr>
<td>Directions to Unit</td>
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<tr>
<td>Ensure that you know where the new unit is and that you have directions to get there. These can be found at ........along with other information about the hospitals and neonatal units.</td>
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<tr>
<td>Discharge Summary</td>
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<tr>
<td>Your baby will have a discharge summary outlining problems during their stay, care given and progress to date. It will helpful to go through this with a member of staff before transfer to ensure you are up to date and understanding of information provided about your baby’s stay</td>
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Parent Information Leaflets and interactive Individual Unit Maps for individual NWLPODN Neonatal Units can be found at:

http://www.londonneonatalnetwork.org.uk
There are NWLPODN checklists both for staff preparing for back transfers and for receiving units.
Discharge Pathways

Corrected age at Discharge Home Benchmarking

North West London Perinatal Network
Mean corrected gestational age at discharge home
for infants born at 30^th^ - 34^th^ weeks gestation
Comparison of neonatal units within NWLPN
1 January 2008 - 31 December 2010

North West London Perinatal Network Units
NWLPODN March 2015
Discharge Pathways

Pathways for admission to discharge have been developed by the NWLPODN
NWLPDN Guidelines

Consensus Guidelines on Resuscitation of Extremely Preterm Infants born at less than 27 weeks gestation.

Report of a Working Group

Sunit Godambe, Michele Cruwys, Ezam Mat-Ali, Nour Elhadi, Alex Mancini, Siew Koay

Endorsed by the Clinical Practice, Data and Governance Sub-group

Preterm infants < 27 weeks should not have cardiac compressions nor adrenaline at delivery

Duration of resuscitation should not exceed 10 minutes
NWLPODN guidelines exist for the follow up of preterm infants and high risk term infants.
NWLPOND Package for Cooling for HIE

- TOBY Register Form
- Pathway for referral of a baby for cooling
- How to passively cool
- Parent Information Leaflet
UK TOBY Cooling Register

Patient identification number (PIN)
please call 01685 298735 during office hours if a PIN is required

Cooling treatment provided at

Month and year of treatment

Gestational age at birth

Sex M ☐ F ☐

Clinical Details of Baby at Birth

Birth weight (gms)

Head circumference (cm)

First Gasp at (min)

Resuscitated >10 minutes

Apgar Score (please write X if unknown)

1 min ☐ 5 min ☐ 10 min ☐ 20 min ☐

Blood gas results (worst set of results within 60 minutes including cord blood)

pH ☐ pCO2 ☐ Base deficit ☐ kPa

Seizures ☐

Encephalopathy ☐

Age when cooling commenced

Pregnancy complications (please tick all those that apply):

None ☐ Diabetes ☐ I illicit drug use ☐ Maternal seizure ☐ Placenta praevia* ☐

Pre-eclampsia* ☐ Thyroid disorder* ☐ Other sentinel event(s) during pregnancy ☐

If Other, please give details:

Mode of Delivery (please tick one):

Pre-labour CS ☐ In labour CS ☐ SVD cephalic ☐ SVD breech ☐ Instrumental delivery ☐

Delivery complications (please tick all those that apply):

None ☐ Head entrapment* ☐ Placental abruption* ☐ Prolapsed cord* ☐

Ruptured uterus ☐ Shoulder dystocia ☐ Other sentinel event(s) during delivery ☐

If Other, please give details:

Congenital abnormalities apparent at birth

Yes ☐ No ☐

If Yes, please describe:

Was an aEEG or EEG performed prior to cooling? (please tick) aEEG ☐ EEG ☐

CFM findings:

Background Normal / Mildly abnormal ☐ Moderately abnormal ☐ Severely abnormal ☐

Seizures ☐

* Definitions for all items on this form marked with an asterisk may be found in the Consultant’s Handbook and in the appendix to this form.
Referral of a Baby for Cooling Treatment
(≥ 36 completed weeks gestation)

Actions for Referring Hospitals

Use in conjunction with
“Cooling guidance for babies presenting with moderate to severe hypoxic ischaemic encephalopathy within the NWLPN”

Step 1 (birth to 1 hour of age)

- Resuscitation
  - Recovery
    - No encephalopathy
    - Continue normothermia
  - Encephalopathy present
    - Start passive cooling

Step 2 (1 - 6 hours of age)

- Passive cooling with continuous rectal or axillary temperature recorded temperature every 15 minutes
  - Assess baby for treatment criteria A and B
    - NO: Cooling not appropriate
      - Step passive cooling
    - YES: Continue with standard care and refer if appropriate
  - Telephone CCCH (Cooling coordinating centre)
    - Contact details outlined
  - Discuss findings and agree management plan with CCCH team
    - Commence CBF/EEG if available

- Maintain passive cooling prior and during transfer (Appendix 4)
- Follow the “Guideline for the management and investigation of neonatal encephalopathy” (Appendix 1)
- CCCH neonatal consultant and senior nursing team will provide telephone advice if required

While awaiting transport team:
- Keep parents informed about baby’s condition, give them the “UK TOBY Cooling Register Patient Information Leaflet” (Appendix 5)
- Arrange now for mother to be transferred and give father information about how to get to the receiving NNU.
- Complete first page of “UK TOBY Cooling Register form” (Appendix 2) and
- Monitor vital signs, rectal / axillary temperature and manage baby’s clinical condition as detailed in the guideline.
- Complete the referring hospital checklist (Appendix 8) and prepare all documentation to accompany baby on transfer.

NWLPN CP0560 Therapeutic Hypothermia Guideline Appendix 3 Referral Flow Chart v4Apr 15

NWLPDN March 2015
Passive Cooling - How to do it

Use in conjunction with "Cooling guidance for babies presenting with moderate to severe hypoxic ischaemic encephalopathy within the NWLPN"

**Target temperature = 33.0 - 34.0°C**

- Commence continuous rectal or axillary temperature monitoring
- Document initial temperature
- Turn off incubator or open thermal cot, open portholes
- Document rectal / axillary temperature every 15 minutes

**Wait 30 minutes**

**Record rectal / axillary temperature**

**Below 33°C**
- Add 1 blanket

**Above 34°C**
- Remove blanket / covering if present
- Consider use of fan if rectal temperature monitoring in place
- Do not use ice packs

**33.0 - 34.0°C**
- No changes required
- **Wait 30 minutes**

- Record rectal / axillary temperature
- Adjust coverings / fan if outside target range
- Reassess every 30 minutes
- Any problems – contact CCCH 020 3313 3174

*Active cooling with a fan should not be used unless rectal temperature monitoring is in place or advised by CCCH consultant*

**Ice packs should not be used for cooling as these can result in severe hypothermia and skin damage.**
Treatment of babies who have perinatal asphyxia
(lack of oxygen before birth). We know that your baby has been very unwell. Your doctor will already have spoken to you about what has happened to your baby and discussed the treatment needed.

You have been given this leaflet because your baby has been born with perinatal asphyxia and is being offered cooling treatment, and this information will help you to understand more about what this means.

What is perinatal asphyxia?
We do not always know what causes perinatal asphyxia but we do know that lack of oxygen to the baby’s brain can lead to brain injury. This injury may be severe and some babies will not survive. If a baby with perinatal asphyxia does survive, there is a chance that the baby will be disabled. Disability can be severe or it can be very mild but some degree of disability occurs in about half of all babies born with perinatal asphyxia.

The only standard treatment we have for perinatal asphyxia is intensive care treatment. There are no specific treatments that definitely help this condition. However, researchers continually try to find ways to improve the health of babies such as yours. There has been much research over recent years into the use of cooling as a possible treatment that could limit the amount of brain injury caused by perinatal asphyxia.

What is cooling?
Cooling means that a baby is cooled from the normal body temperature of 37°C (98.6°F) down to a temperature of 33.5°C (92.3°F). The baby is kept cool for about three days (72 hours). Cooling is started as early as possible after birth, and after 72 hours of cooling the baby’s temperature is slowly returned to normal.

How might cooling help?
There have been several studies that have looked at the effect of cooling after brain injury. These include studies in animals, studies in adults and also studies in babies born with perinatal asphyxia. The three main reported studies of cooling for newborn babies with perinatal asphyxia have suggested that cooling can be beneficial. There may however be side effects from cooling that we do not yet know about.

The TOBY Study
One of the largest of these published studies of newborn babies with perinatal asphyxia was the TOBY Study, funded by the United Kingdom Medical Research Council. Recruitment of 325 babies to the TOBY Study ended in November 2006. Information was collected about TOBY babies at 18 months of age so that the longer-term effects of cooling could be studied. The results were published in the New England Journal of Medicine in October 2009.

Cooling was shown to be beneficial for some babies with perinatal asphyxia.

How will my baby be treated with cooling?
Your baby will receive standard intensive care and in addition your baby will be cooled. This means that your baby will be nursed on a special cooling mattress that cools the whole body to the desired temperature. The mattress is filled with fluid that can be cooled or warmed. You will still be able to touch your baby just as you would if they were not on a cooling mattress.
NWLPODN guidelines exist for home oxygen
NWLPODN Teaching and Training

- NWLPODN Training opportunities
  e.g. communication, simulation
- NWLPODN has run several educational packages e.g. nutrition, palliative care, surgical care
- Teaching materials from these sessions can be found on the NWLPODN website
  [http://www.londonneonatalnetwork.org.uk](http://www.londonneonatalnetwork.org.uk)
- “Born too soon” DVD
NWLPODN Benchmarking for Mean CGA at discharge home

North West London Perinatal Network
Mean corrected gestational age at discharge home
for infants born at 30-34 weeks gestation
Comparison of neonatal units within NWLPN
1 January 2008 - 31 December 2010

Figure 4

NWLPODN Discharge Special Interest Group / Pathway

NWLPODN March 2015
NWLPODN Temperature Benchmarking

North West London Perinatal Network
Average admission temperature for inborn babies admitted within first 24 hours of life
Comparisons of 7 units

NWLPDN Guidance on using plastic bags at delivery
NWLPN Developmental Care Benchmarking
NWLPDN work on improving developmental care in units
NWLPODN Groups

- CPD&G (Clinical Practice, Data and Governance Subgroup)
- ETWR&D (Education, Training, Workforce, Research and Development)
- Parent Representatives Group
- Special Interest Groups
  eg Discharge planning

All welcome to the above groups

- Board Meetings (Membership only)
Information on the NWLPODN can be found at:

http://www.londonneonatalnetwork.org.uk