



Neonatal Clinical Pathways

Introduction

The development of neonatal clinical pathways in the Staffordshire, Shropshire & Black Country Newborn Network has been undertaken to support the implementation of the unit designations approved by the West Midlands's Specialist Commissioning Group.

The pathways have been developed by the Staffordshire, Shropshire & Black Country Newborn Network and reflect principles within the Toolkit for High Quality Neonatal Services¹ and the NICE quality standards².

The aim of the pathways is to put collaborative clinical decision making at the centre of care for babies and parents by defining clear clinical thresholds within the wider West Midlands's Specialist Commissioning Group unit designations to reduce inappropriate transfers whilst maintaining high quality care. The pathways maintain the principle that care for the most severely premature and complex neonates should be in Network Lead Centres. These clinical thresholds are based on best practice, network wide clinical consensus and recommendations from national bodies such as the British Association of Perinatal Medicine.

Acknowledgements

This Neonatal Clinical Pathways document has drawn on material produced by other newborn networks including Trent Perinatal and Central Newborn Networks' "Neonatal Unit Clinical Pathway Threshold Specifications Report" and Southern West Midlands Care Pathways. All contributions are gratefully acknowledged.

Process

The development of the neonatal clinical pathways has been achieved through an open consultation process that has involved; Neonatal and maternity services representatives (neonatal consultants, neonatal nursing leads, unit managers, obstetric and midwifery representatives from all units in SSBCNN), West Midlands Specialist Commissioning Group, parent representatives and local commissioners.

A template for Unit Specific Care Pathways was provided by Network Clinical Leads at a consultation event: Influencing the shape of the Network Care Pathways, these were developed, discussed and amended by key stakeholders including the wider network management team, local commissioners and neonatal and maternity services representatives at the event held in September 2010. Following this, each unit was visited by the Network Manager/Lead Nurse and the Neonatal & Obstetric Clinical Leads to discuss the individual unit pathways. Neonatal, Obstetric and managerial representation at the meetings was provided as deemed appropriate by each Trust. The individual pathways were refined following the visits with the units.

Agreement of the principles of this approach to neonatal care in SSBCNN was obtained at the SSBCNN Board meeting held on 23 March 2011

The pathways are fully supported by the West Midlands Specialised Commissioning Team.

The Staffordshire, Shropshire & Black Country Newborn Network, with the WMSCG will monitor the care received by infants in the SSBC Newborn Network and suggest changes as appropriate in agreement with the provider Trusts.

General principles

Collaborative Clinical decision making

Discussion and collaboration on clinical aspects of individual care between the Network Lead Centres and referring units has been developing in the Staffordshire, Shropshire & Black Country Newborn Network.

What the pathways seek to do is formalise this process at key points of care and reflects resource availability of the neonatal unit and the unit's status of escalation at the time care is required.

Transfer for specialist neonatal medical care

Each unit has an agreed set of clinical indicators that are key points of decision making for the continuance of care for that baby at that unit. Where a baby's clinical indicators fall below that unit's trigger points then transfer to the Lead Centre or other neonatal unit able to provide care at that threshold and appropriate to the unit's care pathway is expected. Babies at thresholds of care may possibly stay within the referring unit if it is expected that the baby's condition will significantly and timely improve against an agreed plan of care with the referring clinician and Lead Centre clinician, and that the referring unit within local resources and designation can safely deliver this plan. Similarly the thresholds for transferring a baby out from an individual unit will alter to reflect the escalation status at the time care is required.

Both the referring unit and Lead Centre must ensure appropriate and accurate record keeping of any discussion leading to agreement for the continuation of care at a referring unit outside of that unit's care pathway and threshold. A network exception report template is provided to record this (See Appendix A).

Repatriation for continuance of care

Within the care pathways, neonatal units within the network must ensure timely repatriation of babies to referring units when that baby's care falls within the referring unit's thresholds and is stable for transfer. This will ensure the most effective use of neonatal cot capacity within the network units whilst ensuring that babies receive care as close to home as possible.

The Lead Centre must ensure appropriate and accurate record keeping of any local decisions or discussions with referring units that delay repatriation appropriate to referring units care thresholds. A network exception report should be completed when repatriation to the referring unit is delayed.

Exception monitoring and compliance to pathways

In order to monitor the effectiveness of the introduction of the pathways the Staffordshire, Shropshire & Black Country Newborn Network will require each unit to provide an exception report for any baby whose continuation of care falls outside of a referring unit's pathway and care thresholds **either for transfer or repatriation.**

The Network will provide a quarterly report of pathway exceptions to the Network Board and to the West Midlands' Specialised Commissioning Group.

In order to ensure that all exception reports are provided, the Network will monitor admission and transfer activity and cross-reference this through the following;

Transfer activity

The neonatal transfer service provide the network a monthly activity report to include;

- Referring unit
- Receiving unit
- Gestation of baby at transfer

Admission activity

The Clevermed neonatal data system in all units in the Staffordshire, Shropshire & Black Country Newborn Network provides the Network with monthly admission numbers for each unit, including gestational age, and enables the identification of babies being cared for outside the agreed pathways.

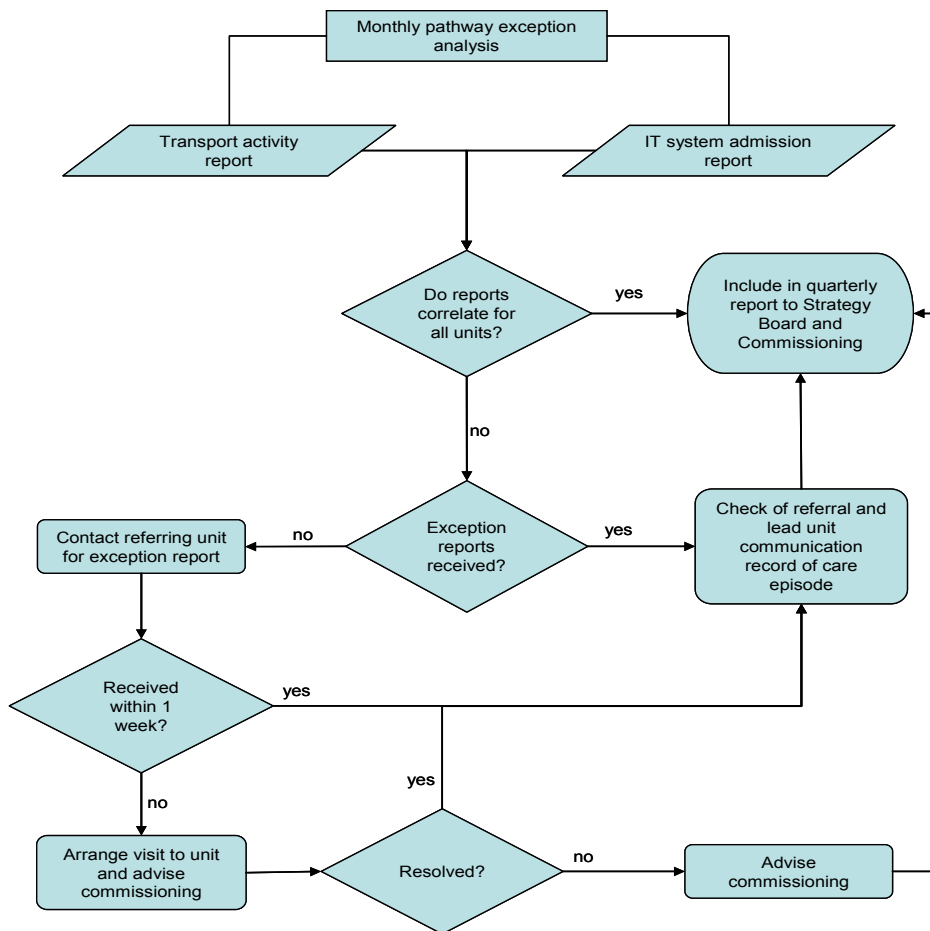
Pathway exception monitoring

The Network has developed an agreed exception report template for return to the Network office by each unit via fax/ email/post. Details within the template include;

- Unit name
- Gestational age of baby
- Reason for exception from pathway, for example;-
 - agreed with Lead Centre as clinically appropriate & why
 - transport availability
 - neonatal capacity within network
 - maternity capacity within network (IUT)
 - unit escalation status
 - Other (state)

Where an exception to the pathway is identified from transport and admission data and no exception report has been received, the Network will request an immediate return from that unit within one week.

Exception reporting flow diagram



Care pathways for the Staffordshire, Shropshire & Black Country Newborn Network Neonatal Units

Introduction

These Care Pathways have been drawn up based on the unit designation process completed in Oct 2005 and reviewed and agreed by the West Midlands Specialised Commissioners in 2007 and 2008 and to reflect the Principles within the Toolkit for High-Quality Neonatal Services published in November 2009. They support the WMSCG's commissioning strategy for Neonatal Services in the West Midlands by providing details of how infants should be cared for across the Staffordshire, Shropshire & Black Country Newborn Network.

The underlying aim of the care pathways are to support the aim of the Network and WMSCG: namely to provide a neonatal service that ensures that mothers and babies are able to access the best and most appropriate level of care at the right place and at the right time, as close to home as possible. This is underpinned by a new focus on clinical discussions, agreement and monitoring.

The care pathways will be supported in operation by using an agreed escalation procedure in each unit. The escalation procedure will reflect unit staffing, activity and dependency level of each neonate, maximising the safe delivery of care in the appropriate level of neonatal services where possible within network.

The organisation of neonatal care within the Staffordshire, Shropshire & Black Country Newborn Network is explained to parents in a Parent Information Leaflet, see appendix B

An estimate of the impact on transfers of babies and mothers based on admission information from each unit for 2009 is given in appendix C.

GESTATION LIMIT

In utero transfers

Where possible, women in premature labour at less than 32 weeks gestation will be transferred to deliver in an appropriate local neonatal unit or neonatal intensive care unit in the network either University Hospital of North Staffordshire Trust or Royal Wolverhampton Hospitals Trust. Place of delivery will be determined by patient choice but this may be subject to cot/bed availability at the time of delivery.

If, for whatever reason, a baby below this gestation limit is delivered at Mid Staffordshire General Hospital, the baby will be stabilised and assessed and an appropriate management plan will be discussed and agreed with the Neonatologist on call for University Hospital of North Staffordshire Trust, the Network Lead Centre.

Ex Utero transfers

Under 32 weeks gestation: Any baby of less than 32 weeks gestation should normally be transferred to an appropriate local neonatal unit or neonatal intensive care unit in the network.

Place of transfer will be determined by the level of neonatal care required as well as patient choice but this may be subject to cot/bed availability at the time of transfer. If there is doubt about necessity for transfer (ie. baby in good condition and not likely to need CPAP for more than 6 hours or baby dying), there will be Consultant to Consultant discussion with Neonatologists at University Hospital of North Staffordshire Trust, Network Lead Centre, and an agreed management plan will be recorded and put in place.

HIGH FETAL RISK / FETAL ANOMOLY

Babies with an antenatal diagnosis of a non-complicated anomaly e.g. Down's Syndrome, Cleft lip and /or palate, will deliver in Mid Staffordshire General Hospital if an agreed postnatal management plan is in place.

Fetuses with some identified surgical conditions, including diaphragmatic hernia, will normally be delivered in Birmingham Women's Hospital unit with close proximity to neonatal surgery at Birmingham Children's Hospital.

Babies with some surgical conditions e.g. Gastroschisis, Tracheo – oesophageal fistula, may be delivered at either University Hospital of North Staffordshire Trust or Royal Wolverhampton Hospitals Trust if there is no cot available in Birmingham Women's Hospital unit with neonatal surgery or if there is an agreed postnatal management plan

Following input from a Paediatric Cardiologist, it may also be appropriate to deliver some antenatally detected cardiac problems in University Hospital of North Staffordshire Trust or Royal Wolverhampton Hospitals Trust to facilitate access to a paediatric cardiology service. Place of delivery will be determined by patient choice but this may be subject to cot/bed availability at the time of delivery.

32 weeks and above: A baby of 32 weeks gestation and above may be kept in MID STAFFORDSHIRE GENERAL HOSPITAL if care falls within the following criteria:

CRITERIA FOR CARE AT MID STAFFORDSHIRE GENERAL HOSPITAL

Ventilation: If any baby requires conventional ventilation the baby will be discussed with Neonatologists at University Hospital of North Staffordshire Trust, Network Lead Centre, and normally be transferred to an appropriate local neonatal unit or neonatal intensive care unit in the network.

HFOV & Nitric Oxide: Babies who require HFOV will be transferred to either University Hospital of North Staffordshire Trust or Royal Wolverhampton Hospitals Trust. Some such infants may need to be transferred out for ECMO or Nitric Oxide and early consideration should be given to this.

CPAP: Babies requiring NCPAP beyond 6 hours of age will be discussed with Neonatologists at University Hospital of North Staffordshire Trust to agree the plan for further case management

TPN: Babies requiring TPN will need to be transferred to an appropriate local neonatal unit or neonatal intensive care unit in the network. Babies exclusively receiving intravenous nutrition for 48 hours should be discussed with Neonatologists at University Hospital of North Staffordshire Trust to agree the plan for further case management.

Surgery / NEC: Babies who require surgery or a surgical opinion for NEC will be transferred out to Birmingham Women's unit surgical centre/ Birmingham Children's Hospital.

Cooling: Newly born infants who require cooling for treatment of perinatal asphyxia will be transferred to either University Hospital of North Staffordshire Trust or Royal Wolverhampton Hospitals Trust determined by patient choice but this will be subject to cot/bed availability at the time of transfer.

Any other unexplained major birth event or problem such as complex metabolic disorder, will be discussed with Neonatologists at University Hospital of North Staffordshire Trust to agree the plan for further case management

BABIES RETURNING TO SPECIAL CARE UNIT

Babies may return to MID STAFFORDSHIRE GENERAL HOSPITAL if stable but should not return if they have a central line in situ or have been ventilated or receiving CPAP or TPN within the last 24 hours.

ANTENATAL TRANSFERS INTO MID STAFFORDSHIRE GENERAL HOSPITAL

Women in preterm labour at 32 weeks gestation and above and assessed as low risk will be accepted in for delivery following discussion with labour ward and the neonatal unit.

REPATRIATION OF BABIES TO REFERRING UNIT

Discussion regarding repatriation must commence between MID STAFFORDSHIRE GENERAL HOSPITAL and the babies referring unit as soon as the baby meets the clinical pathway threshold for that referring unit and arrangements for repatriation commenced as soon as the baby is stable for transfer and a cot is available.

POST NATAL TRANSFERS INTO MID STAFFORDSHIRE GENERAL HOSPITAL

Babies may be transferred to MID STAFFORDSHIRE GENERAL HOSPITAL from any unit in the network if the baby's care requirements fall within the criteria described above. Consideration should be given to the individual family's social circumstances such as access to transport

ESCALATION

The above care pathways will be managed within unit designation as a special care unit (Toolkit for high-quality neonatal services pg 18 3.8). Any babies who cannot be offered care due to unit escalation procedure being activated will move where possible within network to the appropriate level neonatal unit. Each neonatal unit will require to develop a locally owned Unit Escalation Procedure that reflects both staffing and activity to ensure safe delivery of care.

DISCHARGE CRITERIA

Criteria for discharge from the neonatal unit to Postnatal Ward

Babies are discharged to Postnatal ward on an individual basis following observation and assessment by a member of medical staff.

Criteria for discharge home

Baby is able to maintain thermo-control, feeding by breast or bottle and putting on weight. Generally babies are not discharged until 1.6kgs if previously below this weight and preterm.

Transition into Primary Care

Babies discharged home from the neonatal unit with specific paediatric problems will be followed up at home by the paediatric community service.

All other babies discharged home from the special care unit are referred to their primary care team (GP/Health Visitor) via SCBU staff phone call on discharge. Letter sent to GP.

A monthly parent support group is held at the Child Development Centre in Stafford for all discharged babies born within the Staffordshire area at 34 weeks or earlier, or below a birth weight of 1,800 grams (3lb 15oz) or other babies referred by a healthcare professional.

FOLLOW UP

Babies discharged from the neonatal unit meeting the following criteria undergo regular follow up.

- Birth weight ≤ 1500 g
- Gestation < 32 weeks
- Requiring IPPV or CPAP for more than a few hours
- Significant cranial ultrasound abnormality
 - cystic PVL or IVH with significant ventricular dilation defined by consultant following final scan on NICU
- Acute neonatal encephalopathy grade 2 or 3
- Seizures – of whatever cause
- Neonatal meningitis
- Exchange transfusion for any reason
- Major congenital anomalies

Other babies may be followed up at the discretion of the Consultant.

Long Term Neurodevelopmental Follow Up – Network Programme

All babies born at less than 31 weeks gestation and/or those with a very low birth weight of less than 1250g have a Bayley III developmental assessment at a corrected age of 2 years – 2 years 3 months

GESTATION LIMIT

Where possible, women in premature labour at less than 27 weeks gestation will be transferred to deliver in University Hospital of North Staffordshire (UHNS) or New Cross Hospital, the Network Lead Centres. If, for whatever reason, a baby below this gestation limit is delivered at Royal Shrewsbury Hospital, the baby will be stabilised and assessed and an appropriate management plan will be discussed and agreed with the Neonatologist on call for UHNS, the Network Lead Centre. The agreed management plan will be decided based on the baby's clinical condition and may include continuing to receive care at Royal Shrewsbury Hospital or transfer to a neonatal intensive care unit which will usually be within the Staffordshire, Shropshire & Black Country Newborn Network.

Under 27 weeks gestation: Any baby of less than 27 weeks gestation should normally be transferred to a neonatal intensive care unit if continuing intensive care is indicated. Usually this will be at UHNS or New Cross Hospital, the Network Lead Centres in the Staffordshire, Shropshire and Black Country Newborn Network. If there is doubt about necessity for transfer (ie. baby in good condition and not likely to need intensive care for more than 48 hours or baby is dying), there will be consultant to consultant discussion with the Neonatologist on call for UHNS, the Network Lead Centre and an agreed management plan will be recorded and put in place.

27 weeks and above: A baby 27 weeks gestation and above may be kept in ROYAL SHREWSBURY HOSPITAL if care falls within the criteria for care at Royal Shrewsbury Hospital.

HIGH FETAL RISK / FETAL ANOMOLY

Babies with an antenatal diagnosis of congenital anomaly will deliver in Royal Shrewsbury Hospital if an agreed postnatal management plan is in place.

Following input from a Paediatric Cardiologist (BCH), it will also be appropriate to deliver the majority of antenatally detected cardiac problems at Royal Shrewsbury Hospital if an agreed post natal management plan is in place.

Fetuses identified with Diaphragmatic hernia, will normally be delivered in a neonatal surgery unit (Liverpool Women's with close proximity to Alderhey Children's Hospital or Birmingham Women's Hospital unit with close proximity to neonatal surgery at Birmingham Children's Hospital).

CRITERIA FOR CARE AT ROYAL SHREWSBURY HOSPITAL

Ventilation:

If a preterm baby of 27 weeks' gestation or above fails to respond to conventional ventilation, the baby will be discussed with the Neonatologist on call at UHNS the Network Lead Centre and may require transfer to either UHNS or New Cross Hospital the Network Lead Centres.

Any baby who continues to require IPPV for more than 2 days will be discussed with the Neonatologist on call at UHNS the Network Lead Centre and an agreed management plan will be recorded and put in place, this may include continuing to receive care at Royal Shrewsbury Hospital or transfer to a neonatal intensive care unit which will usually be within the Staffordshire, Shropshire & Black Country Newborn Network.

HFOV: Babies who require HFOV will be assessed and remain at Royal Shrewsbury Hospital if appropriate. Failure to respond will be discussed with an ECMO centre and early consideration should be given to this.

Nitric Oxide: Term babies who need iNO will be managed at Royal Shrewsbury Hospital if appropriate. Failure to respond will be discussed with an ECMO centre and early consideration should be given to this.

CPAP: Babies requiring NCPAP will remain at Royal Shrewsbury Hospital

TPN: Babies requiring TPN will be managed at Royal Shrewsbury Hospital

Surgery including NEC: Babies who require surgery or a surgical opinion (including for NEC) will be transferred out to Alderhey Children's Hospital Liverpool or Birmingham Children's neonatal surgical centres. Sometimes this may include a transfer to the surgical cots at Birmingham Women's Hospital.

Cooling: Newly born infants who require cooling for treatment of perinatal asphyxia will have active cooling initiated at RSH prior to being transferred with continued active cooling to UHNS or New Cross Hospital the Network Lead Centres or an appropriate neonatal intensive care unit.

BABIES RETURNING TO ROYAL SHREWSBURY HOSPITAL

Babies may return to Royal Shrewsbury Hospital if they are stable and the care they require meets the criteria for care at Royal Shrewsbury Hospital as described above. Some babies who are stable and are still receiving conventional IPPV may return to Royal Shrewsbury Hospital if extubation is anticipated within 48 hours e.g post-op transfers/transfers back from ECMO.

ANTENATAL TRANSFERS INTO ROYAL SHREWSBURY HOSPITAL

Women in preterm labour at or above 27 weeks gestation may be accepted in for delivery in consultation with the maternity unit lead.

REPATRIATION OF BABIES TO REFERRING UNIT

Discussion regarding repatriation must commence between Royal Shrewsbury Hospital and the babies referring unit as soon after admission as possible and before the baby meets the clinical pathway threshold for the referring unit. Arrangements for repatriation should be commenced as soon as the baby is stable for transfer.

POSTNATAL TRANSFERS OUT FROM ROYAL SHREWSBURY HOSPITAL FOR CONTINUING CARE

All babies care levels will be assessed daily in order to ensure efficient use of network cots i.e. the right baby is in the right cot at the right time. When babies no longer require intensive/high dependency care suitability for transfer to another unit of appropriate level in the network will be considered based on level of neonatal care required, social and safeguarding issues.

ESCALATION

The above care pathways will be managed within unit designation as a local neonatal unit (Toolkit for high- quality neonatal services pg 18 3.8). Any babies who cannot be offered care due to unit escalation procedure being activated will move where possible within network to the appropriate level neonatal unit. Each neonatal unit will require to develop a locally owned Unit Escalation Procedure that reflects both staffing and activity to ensure safe delivery of care.

DISCHARGE CRITERIA

Discharge to Post Natal Ward Criteria

- 35 weeks gestation
- On full oral feeds
- Individual basis following review by Nursing and Medical staff

Discharge Home Criteria

- Baby well
- Established feeds and gaining weight
- Maintaining temperature in a cot
- Parent(s) agree
- Babies can be discharged home on oxygen and /or receiving tube feeds, these are decided on an individual basis

Transition into Primary Care

The liaison Health Visitor attends the neonatal unit daily and she alerts the relevant health visitor about the babies on the neonatal unit.

On the day of discharge either the community midwife and/or the health visitor (as appropriate) are telephoned to inform them of the discharge of the baby from the neonatal unit.

Babies meeting the following criteria are referred for follow up by the community outreach team:

- Less than 30 weeks gestation at birth
- Less than 1.8kgs on discharge
- O₂ Dependent
- NAS on prescribed medication
- Feeding problems/poor weight gain
- Screening follow up PKU
- Shared care with Paediatric community team (up to 6 months)
- Other babies at the discretion of NNU Nursing and Medical staff

Follow Up

Babies discharged from the neonatal unit meeting the following criteria undergo regular follow up.

- Birth weight ≤1500 g
- Gestation <32 weeks
- Requiring IPPV or CPAP for more than a few hours
- Significant cranial ultrasound abnormality
 - cystic PVL or IVH with significant ventricular dilation defined by consultant following final scan on NICU
- Acute neonatal encephalopathy grade 2 or 3
- Seizures – of whatever cause
- Neonatal meningitis
- Exchange transfusion for any reason
- Major congenital anomalies

Other babies may be followed up at the discretion of the Consultant.

Long Term Neurodevelopmental Follow Up – Network Programme

All babies born at less than 31 weeks gestation and/or those with a very low birth weight of less than 1250g have a Bayley III developmental assessment at a corrected age of 2 years – 2 years 3 months

UNIVERSITY HOSPITAL OF NORTH STAFFORDSHIRE (NETWORK LEAD CENTRE) UNIT SPECIFICATION

GESTATION LIMIT

Whilst accepting that some infants may be born 'preivable' and not actively resuscitated; as part of the Network Lead Centre, University Hospital of North Staffordshire shall treat babies of the entire gestational age spectrum.

HIGH FETAL RISK / FETAL ANOMOLY

Babies with an antenatal diagnosis of cardiac or other congenital anomaly will deliver in University Hospital of North Staffordshire if an agreed postnatal management plan is in place. Fetuses with some identified surgical conditions will normally be delivered at University Hospital of North Staffordshire. Following input from a Paediatric Cardiologist, it is appropriate to deliver antenatally detected cardiac problems in university Hospital of North Staffordshire.

Perinatal Meeting

Care Plan Made

Antenatal Counselling clinic – letter to parents

Delivery following care plan

Fetuses with some identified surgical conditions including Diaphragmatic hernia, will normally be delivered in a neonatal surgery unit (Liverpool Women's with close proximity to Alderhey Children's Hospital or Birmingham Women's Hospital unit with close proximity to neonatal surgery at Birmingham Children's Hospital).

CRITERIA FOR CARE AT UNIVERSITY HOSPITAL OF NORTH STAFFORDSHIRE (NETWORK LEAD CENTRE)

Ventilation: Babies receiving all ventilatory modalities shall be suitable for treatment at University Hospital of North Staffordshire

When full, transfer to PICU

HFOV: Babies who require HFOV will be assessed and remain at University Hospital of North Staffordshire if appropriate.

Nitric Oxide: Term babies who need iNO will be managed at University Hospital of North Staffordshire. Failure to respond will be discussed with an ECMO centre and early consideration should be given to this.

CPAP: Babies requiring NCPAP will be managed at University Hospital of North Staffordshire

Care pathways needed for acute and chronic CPAP

Acute CPAP – Care delivered in neonatal intensive care and local neonatal units

Long term/Chronic CPAP – consider transfer to special care unit within network (once appropriate training and facilities are in place) and subject to individual social and/or safe guarding issues.

TPN: Babies requiring TPN will be managed on the University Hospital of North Staffordshire

NEC: Babies who do not require surgery or a surgical opinion for NEC will be managed at University Hospital of North Staffordshire

Surgery: Babies who require surgery or a surgical opinion will be transferred out to Liverpool neonatal surgical centre.

Cooling: Newly born infants who require cooling for treatment of perinatal asphyxia will be managed at University Hospital of North Staffordshire

BABIES RETURNING TO UNIVERSITY HOSPITAL OF NORTH STAFFORDSHIRE

Babies may return to University Hospital of North Staffordshire when clinically stable for transfer and there is sufficient capacity to accept the transfer.

ANTENATAL TRANSFERS INTO UNIVERSITY HOSPITAL OF NORTH STAFFORDSHIRE

Except in the presence of known severe antenatally detected surgical problems (where delivery in a supra-specialist centre is recommended), all women below 28 weeks gestation may be considered for delivery at University Hospital of North Staffordshire. Women at 28 weeks gestation and above should not routinely be considered for delivery at University Hospital of North Staffordshire unless the woman is very sick or there are indications that the baby will require complex or long term intensive care or the request to transfer the woman has been declined by the three network local neonatal units at Shrewsbury, Walsall and Dudley.

REPATRIATION OF BABIES TO REFERRING UNIT

Discussion regarding repatriation must commence between University Hospital of North Staffordshire and the babies referring unit as soon after admission as possible and before the baby meets the clinical pathway threshold for the referring unit. Arrangements for repatriation should be commenced as soon as the baby is stable for transfer.

POSTNATAL TRANSFERS OUT FROM UNIVERSITY HOSPITAL OF NORTH STAFFORDSHIRE FOR CONTINUING CARE

All babies care levels will be assessed daily in order to ensure efficient use of network cots i.e. the right baby is in the right cot at the right time. When babies no longer require intensive care suitability for transfer to another unit of appropriate level in the network will be considered based on level of neonatal care required, social and safeguarding issues.

ESCALATION

The above care pathways will be managed within unit designation as a neonatal intensive care unit (Toolkit for high- quality neonatal services pg 18 3.8). Any babies who cannot be offered care due to unit escalation procedure being activated will move where possible within network to the appropriate level neonatal unit.

Each neonatal unit will require to develop a local owned Unit Escalation Procedure that reflects both staffing and activity to ensure safe delivery of care.

Unit escalation status completed twice a day at 09.30 am and 17.00

DISCHARGE CRITERIA

Discharge from the neonatal unit to:

- **Postnatal Ward**

Mother is an in patient

Baby well, establishing feeding, maintaining temperature in a cot and not needing continuous specialist neonatal care/monitoring

E.g. Completing 48 hour course of IV antibiotics

- **Home**

Baby well

On full feeds and gaining weight

Maintaining temperature in a cot

Parent(s) agree

Babies can be discharged home on oxygen and /or receiving tube feeds, these are decided on an individual basis

Transition into Primary Care

Babies discharged home with long term medical problems are referred to the appropriate paediatric community team for follow up at home

All other babies discharged home from the neonatal unit are referred to the neonatal community nurse for short term follow up at home prior to discharge when care will be transferred to the Health visitor

A monthly parent support group “Helping Hands” is held at the Child Development Centre in Stoke on Trent for all discharged babies born within the North Staffordshire area at 31 weeks or earlier, or below a birth weight of 1,250 grams (2lb 12oz) or other babies referred by a healthcare professional.

Follow Up

Babies are followed up in the neonatal clinic as per the SSBCNN Neonatal Guideline

Follow Up

Babies discharged from the neonatal unit meeting the following criteria undergo regular follow up.

- Birth weight \leq 1500 g
- Gestation <32 weeks
- Requiring IPPV or CPAP for more than a few hours
- Significant cranial ultrasound abnormality
 - cystic PVL or IVH with significant ventricular dilation defined by consultant following final scan on NICU
- Acute neonatal encephalopathy grade 2 or 3
- Seizures – of whatever cause
- Neonatal meningitis
- Exchange transfusion for any reason
- Major congenital anomalies

Other babies may be followed up at the discretion of the Consultant.

Long Term Neurodevelopmental Follow Up – Network Programme

All babies born at less than 31 weeks gestation and/or those with a very low birth weight of less than 1250g have a Bayley III developmental assessment at a corrected age of 2 years – 2 years 3 months

GESTATION LIMIT

In utero transfers

Where possible, women in premature labour at less than 28 weeks gestation will be transferred to deliver in New Cross Hospital the Network Lead Centre. If, for whatever reason, a baby below this gestation limit is delivered at WALSALL MANOR HOSPITAL, the baby will be stabilised and assessed and an appropriate management plan will be discussed and agreed with the Neonatologist on call for New Cross Hospital the Network Lead Centre.

Ex Utero transfers

Under 28 weeks gestation: Any baby of less than 28 weeks gestation should normally be transferred to a neonatal intensive care unit if continuing intensive care is indicated. Usually this will be at New Cross Hospital, the Network Lead Centre in the Black Country within the Staffordshire, Shropshire and Black Country Newborn Network. If there is doubt about necessity for transfer (ie. baby in good condition and not likely to need intensive care for more than 48 hours or baby is dying), there will be consultant to consultant discussion with the Neonatologist on call for New Cross Hospital, the Network Lead Centre and an agreed management plan will be recorded and put in place.

28 weeks and above: A baby above 28 weeks gestation may be kept in WALSALL MANOR HOSPITAL if care falls within the criteria for care at Walsall Manor Hospital.

HIGH FETAL RISK / FETAL ANOMOLY

Babies with an antenatal diagnosis of cardiac or other congenital anomaly will deliver in WALSALL MANOR HOSPITAL if an agreed postnatal management plan is in place.

Fetuses with some identified surgical conditions including diaphragmatic hernia will normally be delivered in Birmingham Women's Hospital unit with close proximity to neonatal surgery at Birmingham Children's Hospital.

Wherever possible, babies with gastroschisis will be delivered at Birmingham Women's Hospital. (short term until 24/7 ANNP cover secured at WMH)

CRITERIA FOR CARE AT Walsall Manor Hospital

Ventilation: If a preterm baby of 28 weeks' gestation or above fails to respond to conventional ventilation the baby will be discussed with the Neonatologist on call for New Cross Hospital the Network Lead Centre and may require transfer out to New Cross Hospital the Network Lead Centre.

Any baby who continues to require IPPV for more than 2 days will be discussed with the Neonatologist on call for New Cross Hospital the Network Lead Centre and an agreed management plan will be recorded and put in place, this may include continuing to receive care at Walsall Manor Hospital or transfer to a neonatal intensive care unit which will usually be within the Staffordshire, Shropshire & Black Country Newborn Network.

Any baby who is difficult to stabilise should be discussed (consultant to consultant) with New Cross Hospital the Network Lead Centre.

SPECIALIST VENTILATION (HFOV/iNO): All Babies not responding to conventional ventilation will be referred to New Cross Hospital the Network Lead Centre.

Some such infants may need to be transferred out for ECMO or Nitric Oxide and early consideration should be given to this.

CPAP: Babies requiring NCPAP will remain at WALSALL MANOR HOSPITAL

TPN: Babies requiring TPN will be managed at WALSALL MANOR HOSPITAL

Surgery including NEC: Babies who require surgery or a surgical opinion (including for NEC) will be transferred out to Birmingham Children's neonatal surgical centre, sometimes this may include a transfer to the surgical cots on the neonatal unit at Birmingham Women's Hospital.

Cooling: Newly born infants who require cooling for treatment of perinatal asphyxia will be transferred to New Cross Hospital the Network Lead Centre or appropriate Neonatal Intensive Care Unit.

BABIES RETURNING TO WALSALL MANOR HOSPITAL

Babies may return to WALSALL MANOR HOSPITAL if they are stable and the care they require meets the criteria for care at Walsall Manor Hospital as described above. Some babies who are stable and are still receiving conventional IPPV may return to Walsall Manor Hospital if extubation is anticipated within 48 hours e.g post-op transfers/transfers back from ECMO.

ANTENATAL TRANSFERS INTO WALSALL MANOR HOSPITAL

Women in preterm labour at or above 28 weeks gestation may be accepted in for delivery in consultation with the obstetric team.

REPATRIATION OF BABIES TO REFERRING UNIT

Discussion regarding repatriation must commence between WALSALL MANOR HOSPITAL and the babies referring unit as soon after admission as possible and before the baby meets the clinical pathway threshold for the referring unit. Arrangements for repatriation should be commenced as soon as the baby is stable for transfer.

POSTNATAL TRANSFERS OUT FROM WALSALL MANOR HOSPITAL FOR CONTINUING CARE

All babies care levels will be assessed daily in order to ensure efficient use of network cots i.e. the right baby is in the right cot at the right time. When babies no longer require intensive/high dependency care suitability for transfer to another unit of appropriate level in the network will be considered based on level of neonatal care required, social and safeguarding issues.

ESCALATION

The above care pathways will be managed within unit designation as a local neonatal unit (Toolkit for high- quality neonatal services pg 18 3.8). Any babies who cannot be offered care due to unit escalation procedure being activated will move where possible within network to the appropriate level neonatal unit. Each neonatal unit will require to develop a locally owned Unit Escalation Procedure that reflects both staffing and activity to ensure safe delivery of care.

DISCHARGE

Discharge to Post Natal Ward Criteria

- Mother is an in patient
- Baby well, establishing feeding, maintains temperature in a cot, not needing continuous specialist neonatal care/monitoring. E.g. Completing 48 hour course of IV antibiotics

Discharge Home Criteria

- feeding well 3 hourly
- gaining weight appropriately
- clinically well

Transition into Primary Care

Follow up based on birth weight and gestation

>2.3kg AND > 34/40

- Follow up with community midwife / Health visitor – contacted prior to discharge

<2.3kg OR < 34/40

- Short term weekly follow up with community neonatal nurse alongside Health visitor then care transferred to Health visitor

Babies going home on oxygen

- Follow up by community neonatal nurse initially then care transferred to community children's nurses

Discharge planning meetings take place prior to discharge for any of the following reasons:

- Going home on oxygen
- Social issues
- Complex needs

FOLLOW UP

Babies meeting the following criteria undergo regular follow up, including developmental follow up until 2 years corrected age.

- Birth weight \leq 1500 g
- Gestation <32 weeks
- Requiring IPPV or CPAP for more than a few hours
- Significant cranial ultrasound abnormality
 - cystic PVL or IVH with significant ventricular dilation defined by consultant following final scan on NICU
- Acute neonatal encephalopathy grade 2 or 3
- Seizures – of whatever cause
- Neonatal meningitis
- Exchange transfusion for any reason
- Major congenital anomalies

Other babies may be seen once or twice in clinic at the discretion of the Consultant.

Long Term Neurodevelopmental Follow Up – Network Programme

All babies born at less than 31 weeks gestation and/or those with a very low birth weight of less than 1250g have a Bayley III developmental assessment at a corrected age of 2 years – 2 years 3 months

RUSSELL'S HALL HOSPITAL UNIT SPECIFICATION

GESTATION LIMIT

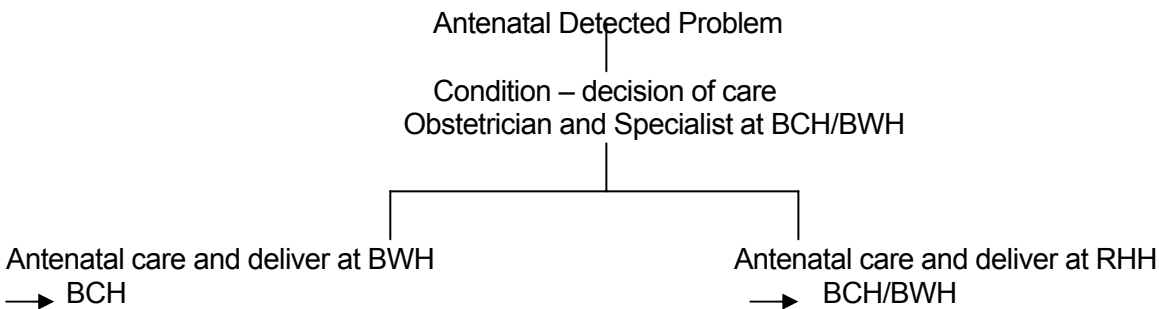
In-Utero: Where possible, women in premature labour at 27 weeks gestation or less will be transferred to deliver in New Cross Hospital the Network Lead Centre. If, for whatever reason, a baby below this gestation limit is delivered at Russell's Hall Hospital, the baby will be stabilised and assessed and an appropriate management plan will be discussed and agreed with the Neonatologist on call for New Cross Hospital, the Network Lead Centre. The agreed management plan will be decided based on the baby's clinical condition and may include continuing to receive care at Russell's Hall Hospital or transfer to a neonatal intensive care unit which will usually be within the Staffordshire, Shropshire & Black Country Newborn Network.

Postnatal: Any baby of 27 weeks gestation or less should normally be transferred to a neonatal intensive care unit if continuing intensive care is indicated. Usually this will be at New Cross Hospital, the Network Lead Centre in the Black Country within the Staffordshire, Shropshire and Black Country Newborn Network. If there is doubt about necessity for transfer (ie. baby in good condition and not likely to need intensive care for more than 48 hours or baby is dying), there will be consultant to consultant discussion with the Neonatologist on call for New Cross Hospital, the Network Lead Centre and an agreed management plan will be recorded and put in place.

Over 27 weeks gestation: A baby over 27 weeks gestation may be kept in RUSSELL'S HALL HOSPITAL if care falls within the criteria for care at Russell's Hall Hospital.

HIGH FETAL RISK / FETAL ANOMOLY

Babies with an antenatal diagnosis of **cardiac or other congenital anomaly** will deliver in RUSSELL'S HALL HOSPITAL if an agreed postnatal management plan is in place.



Fetuses with some identified surgical conditions including Diaphragmatic hernia, will normally be delivered in Birmingham Women's Hospital unit with close proximity to neonatal surgery at Birmingham Children's Hospital.

CRITERIA FOR CARE AT RUSSELL'S HALL HOSPITAL

Ventilation:

If a preterm baby over 27 weeks gestation fails to respond to conventional ventilation, the baby will be discussed with the Neonatologist on call at New Cross Hospital the Network Lead Centre and may require transfer to New Cross Hospital the Network Lead Centre.

Any baby who continues to require IPPV for more than 2 days will be discussed with the Neonatologist on call at New Cross Hospital the Network Lead Centre and an agreed management plan will be recorded and put in place, this may include continuing to receive care at Russell's Hall Hospital or transfer to a neonatal intensive care unit which will usually be within the Staffordshire, Shropshire & Black Country Newborn Network..

SPECIALIST VENTILATION (HFOV/iNO): All Babies not responding to conventional ventilation will be referred to New Cross Hospital the Network Lead Centre.

Some such infants may need to be transferred out for ECMO or Nitric Oxide and early consideration should be given to this.

CPAP: Babies requiring NCPAP will remain at RUSSELL'S HALL HOSPITAL

TPN: Babies requiring TPN will be managed at RUSSELL'S HALL HOSPITAL

Surgery including NEC: Babies who require surgery or a surgical opinion (including for NEC) will be transferred out to Birmingham Children's neonatal surgical centre, sometimes this may include a transfer to the surgical cots at Birmingham Women's Hospital.

Cooling: Newly born infants who require cooling for treatment of perinatal asphyxia will be transferred to New Cross Hospital the Network Lead Centre or an appropriate neonatal intensive care unit.

BABIES RETURNING TO RUSSELL'S HALL HOSPITAL

Babies may return to RUSSELL'S HALL HOSPITAL if they are stable and the care they require meets the criteria for care at Russell's Hall Hospital as described above. Some babies who are stable and are still receiving conventional IPPV may return to Russell's Hall Hospital if extubation is anticipated within 48 hours e.g post-op transfers/transfers back from ECMO.

ANTENATAL TRANSFERS INTO RUSSELL'S HALL HOSPITAL

Women in preterm labour over 27 weeks gestation may be accepted in for delivery in consultation with the maternity unit lead.

REPATRIATION OF BABIES TO REFERRING UNIT

Discussion regarding repatriation must commence between RUSSELL'S HALL HOSPITAL and the babies referring unit as soon after admission as possible and before the baby meets the clinical pathway threshold for the referring unit. Arrangements for repatriation should be commenced as soon as the baby is stable for transfer.

POSTNATAL TRANSFERS OUT FROM RUSSELL'S HALL HOSPITAL FOR CONTINUING CARE

All babies care levels will be assessed daily in order to ensure efficient use of network cots i.e. the right baby is in the right cot at the right time. When babies no longer require intensive/high dependency care suitability for transfer to another unit of appropriate level in the network will be considered based on level of neonatal care required, social and safeguarding issues.

ESCALATION

The above care pathway will be managed within unit designation as a local neonatal unit (Toolkit for high-quality neonatal services pg 18 3.8). Any babies who cannot be offered care due to unit escalation procedure being activated will move where possible within network to the appropriate level neonatal unit. Each neonatal unit will require to develop a locally owned Unit Escalation Procedure that reflects both staffing and activity to ensure safe delivery of care.

DISCHARGE CRITERIA

Each baby is individually assessed by a Consultant/Registrar or ANNP to ensure they are well enough to be discharged home. Although there are no set criteria for discharge, the following points are adhered to:

- A sustained pattern of weight gain rather than a specific achieved weight
- Physiologic stability defined as the ability to suckle feed and maintain normal body temperature in an open environment.
- An active programme of parental involvement and preparation for post hospital care, which incorporates the optimisation of their parenting skills and enhancing their confidence to care for their baby independently. This is accomplished by offering all parents the use of the self-contained flat on the neonatal unit before discharge.
- Frequent outpatient follow-up to assure adequate weight gain for the smallest infants commencing four to six weeks immediately after discharge.
- Referral to the Children's Ward via completion of a Paediatric Alert Form to ensure timely treatment is delivered if admission to hospital is necessary

Transition into Primary Care

An active programme of parental support after discharge of the baby in the home setting is ensured by the community neonatal team.

Babies who require extra support after discharge e.g. oxygen dependant babies, will need the community team to organise a pre-discharge meeting with other multidisciplinary community team members

On discharge, all parents will be provided with a Discharge letter. The Discharge letter (a copy of which is retained in the notes and also faxed to the GP and Health Visitor), will be sealed and addressed to the GP

A monthly parent support group for babies discharged from the neonatal unit in Dudley is held at Woodside Childrens' Centre, Dudley

Follow Up

Babies discharged from the neonatal unit meeting the following criteria undergo regular follow up.

- Birth weight ≤ 1500 g
- Gestation < 32 weeks
- Requiring IPPV or CPAP for more than a few hours
- Significant cranial ultrasound abnormality
 - cystic PVL or IVH with significant ventricular dilation defined by consultant following final scan on NICU
- Acute neonatal encephalopathy grade 2 or 3
- Seizures – of whatever cause
- Neonatal meningitis
- Exchange transfusion for any reason
- Major congenital anomalies

Other babies may be followed up at the discretion of the Consultant.

Long Term Neurodevelopmental Follow Up – Network Programme

All babies born at less than 31 weeks gestation and/or those with a very low birth weight of less than 1250g have a Bayley III developmental assessment at a corrected age of 2 years – 2 years 3 months

ROYAL WOLVERHAMPTON HOSPITAL (NETWORK LEAD CENTRE) UNIT SPECIFICATION

GESTATION LIMIT

Whilst accepting that some infants may be born 'pre-viable' and not actively resuscitated; as part of the Network Lead Centre, ROYAL WOLVERHAMPTON HOSPITAL shall treat babies of the entire gestational age spectrum.

HIGH FETAL RISK / FETAL ANOMOLY

Babies with an antenatal diagnosis of cardiac or other congenital anomaly will deliver in ROYAL WOLVERHAMPTON HOSPITAL if an agreed postnatal management plan is in place. Fetuses with some identified surgical conditions will normally be delivered at ROYAL WOLVERHAMPTON HOSPITAL. Following input from a Paediatric Cardiologist, it is appropriate to deliver antenatally detected cardiac problems in ROYAL WOLVERHAMPTON HOSPITAL.

Where ever possible fetuses with some identified surgical conditions such as diaphragmatic hernia and gross fetal anomalies will normally be delivered in a unit with neonatal surgery.

Birmingham Women's Hospital → Birmingham Children's Hospital.

CRITERIA FOR CARE AT ROYAL WOLVERHAMPTON HOSPITAL (NETWORK LEAD CENTRE)

Ventilation: Babies receiving all ventilatory modalities shall be suitable for treatment at ROYAL WOLVERHAMPTON HOSPITAL

HFOV: Babies who require HFOV will be assessed and remain at ROYAL WOLVERHAMPTON HOSPITAL if appropriate.

Nitric Oxide: Term babies who need iNO will be managed at ROYAL WOLVERHAMPTON HOSPITAL. Failure to respond will be discussed with an ECMO centre and early consideration should be given to this.

CPAP: Babies requiring NCPAP will remain at ROYAL WOLVERHAMPTON HOSPITAL

TPN: Babies requiring TPN will be managed at ROYAL WOLVERHAMPTON HOSPITAL

Cooling: Newly born infants who require cooling for treatment of perinatal asphyxia will be managed at ROYAL WOLVERHAMPTON HOSPITAL.

Surgery including NEC: Babies who require surgery or a surgical opinion (including for NEC) will normally be transferred out to Birmingham Women's / Birmingham Children's neonatal surgical centre.

BABIES RETURNING TO ROYAL WOLVERHAMPTON HOSPITAL (NETWORK LEAD CENTRE)

Babies may return to ROYAL WOLVERHAMPTON HOSPITAL (when clinically stable for transfer.

ANTENATAL TRANSFERS INTO ROYAL WOLVERHAMPTON HOSPITAL (NETWORK LEAD CENTRE)

Except in the presence of known severe antenatally detected surgical problems (where delivery in a supra-specialist centre is recommended), all women below 28 weeks gestation may be considered for delivery at ROYAL WOLVERHAMPTON HOSPITAL. Women at 28 weeks gestation and above should not routinely be considered for delivery at Royal Wolverhampton Hospital unless the woman is very sick or there are indications that the baby will require complex or long term intensive care or the request to transfer the woman has been declined by the three network local neonatal units at Shrewsbury, Walsall and Dudley.

NETWORK LEAD CENTRE – NEONATOLOGIST ROLE

As the network lead centre in the Black Country, Neonatologists on the neonatal unit at ROYAL WOLVERHAMPTON Hospital will be actively involved in the decisions required in the exception reports completed for individual babies born in the network LNUs and SCBU who fall outside of the usual criteria for that unit but for whom it is deemed appropriate for them to remain in their local unit rather than transfer out to a neonatal intensive care unit or local neonatal unit.

POSTNATAL TRANSFERS OUT FROM ROYAL WOLVERHAMPTON HOSPITAL FOR CONTINUING CARE

All babies care levels will be assessed daily in order to ensure efficient use of network cots i.e. the right baby is in the right cot at the right time. When babies no longer require intensive/high dependency care suitability for transfer to another unit of appropriate level in the network will be considered based on level of neonatal care required, social and safeguarding issues. It will be important to make parents aware of this during their booking visit

ESCALATION

The above care pathways will be managed within unit designation as a neonatal intensive care unit (Toolkit for high- quality neonatal services pg 18 3.8). Any babies who cannot be offered care due to unit escalation procedure being activated will move where possible within network to the appropriate level neonatal unit.

Each neonatal unit will be required to develop a locally owned Unit Escalation Procedure that reflects both staffing and activity to ensure safe delivery of care.

REPATRIATION OF BABIES TO REFERRING UNIT

Discussion regarding repatriation must commence between ROYAL WOLVERHAMPTON HOSPITAL and the babies referring unit as soon after admission as possible and before the baby meets the clinical pathway threshold for the referring unit. Arrangements for repatriation should be commenced as soon as the baby is stable for transfer.

DISCHARGE TO TRANSITIONAL CARE

Transitional Care Admission Guideline

Admission criteria from Delivery Suite

- Gestation 34 – 36 weeks.
- Lower weight limit 1.7 kg
- Upper weight limit 2.45-2.5kg dependent on gestation
- All babies below 36 weeks and / or < 2.45kg must be admitted to Transitional Care
- Babies who are borderline and not treated as T/C should be observed to ensure there are no feeding issues. Babies can be transferred into Transitional Care if any problems develop.
- Substance misuse

Admission criteria from NNU

- Gestation 34 – 36 weeks.
- Weight below 2.5kg
- Babies of 33 weeks gestation who have been stable on NNU for 24 hours are suitable for transfer to Transitional Care

DISCHARGE HOME

Referral criteria to Neonatal Community Liaison Team (NCLT)

- A gestation of 34 weeks and below
- Less than 2kgs
- A baby that has been on the neonatal unit for more than 10 days
- A request from neonatal consultants
- Oxygen at home

The baby must be established on full feeds, managing their temperature in a cot and all observations stable.

The NCLT attend the morning ward rounds three times a week and work closely with the consultants in planning all discharges from the neonatal unit. Prior to discharge all babies and families will meet a member of NCLT to discuss support they will receive at home. A discharge pack is given to parents prior to discharge. The team offer a 7 day a week service and the option to take babies home on short term tube feeding if appropriate.

Babies and families can be discharged from the NCLT once there have been 4 good weight gains and the family feels supported enough for discharge to happen. Once discharge has been agreed the red book is completed with current weight and a brief entry of care during this period. A referral is made to the health

visitor so they are aware that the baby has been discharged from the NCLT. If the baby requires on going medical care then appropriate referrals are made.

A monthly parent support group "Helping Hands" is held at the GEM Centre in Wolverhampton for all discharged babies born within the Wolverhampton area at 31 weeks or earlier, or below a birth weight of 1,250 grams (2lb 12oz) or other babies referred by a healthcare professional.

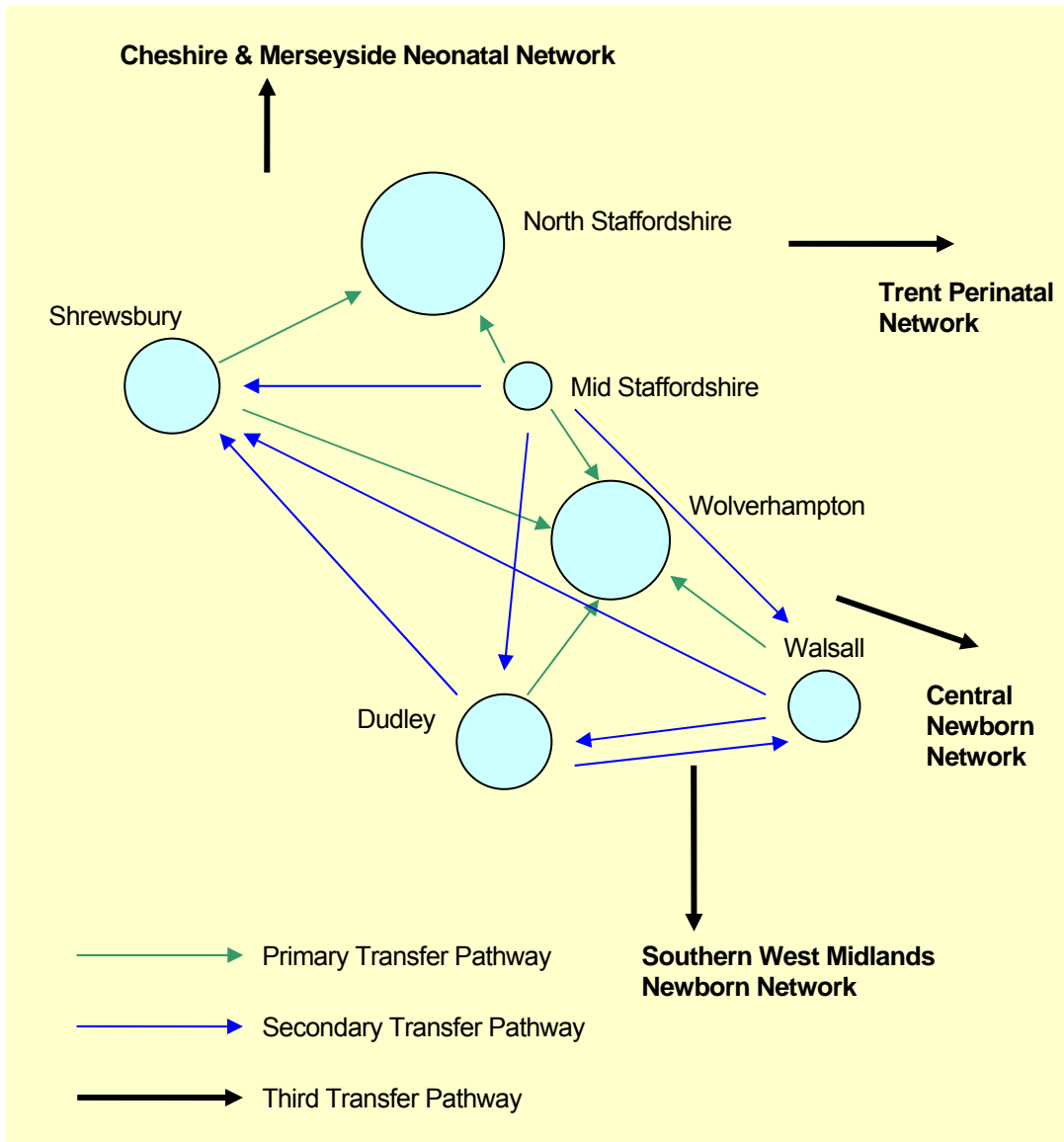
FOLLOW UP

All babies less than 32 weeks gestation discharged from the neonatal unit have developmental follow up at 6 weeks, 6 months and 1 year corrected and are generally discharged at 2 years corrected. In addition any ventilated baby, babies who have received therapeutic cooling or who are identified as having complex needs will also be followed up as above.

Any baby with specific medical needs e.g. renal pelvic dilatation, O₂ dependent, cardiac problem etc would have follow up in the neonatal clinic in children's OPA and would be jointly managed with BCH or other specialists as appropriate.

Long Term Neurodevelopmental Follow Up – Network Programme

All babies born at less than 31 weeks gestation and/or those with a very low birth weight of less than 1250g have a Bayley III developmental assessment at a corrected age of 2 years – 2 years 3 months



Conclusion

The introduction of these clinical pathway thresholds for each unit within the Staffordshire, Shropshire & Black Country Newborn Network creates a system of care that puts clinical decision and collaboration at the centre of neonatal care while ensuring the delivery of high quality services.

The pathway principle for describing the care provided in units as part of a wider commissioning designation is well supported by neonatal, obstetric and midwifery staff and is supported by the West Midlands Specialised Commissioning Team

With other initiatives within the network such as the standardisation of data collection and analysis and development of quality monitoring and audit it provides providers, commissioners and clinicians a framework to better understand the services provided as well as a common point of reference in developing services for the future.

Appendix A

Draft Exception Report Template

DRAFT TEMPLATE

Staffordshire, Shropshire & Black Country
Newborn Network



Care Pathway Exception Report

Referring Unit:

Baby:

Name:

DOB:

Hospital Number/NHS Number:

(Complete patient details or Affix Patient
Identification label on copy for patient notes)

Name of Consultant at Referring Hospital:

Date:

Time:

Brief Details of the exception(s) to care pathway:

Network Lead Centre: (Tick box as appropriate)

UHNS

RWH

Name of Consultant at Network Lead Centre:

Outcome of Consultant to Consultant discussion: (Tick box as appropriate)

Baby to be transferred to:

Baby to remain at referring unit with the following agreed management plan:

Agreed Date for review with Network Lead Centre:

Additional Comments:

Guidance for completing Exception reports

1. An exception report should be completed for any baby admitted to a neonatal unit in the SSBCNN that falls outside of that unit's criteria for care or any baby that is not repatriated to its referring unit once its care falls within the criteria of care for that unit.
2. Copies of the exception report template can be downloaded from the network website.
3. The referring unit (where the baby has been admitted) should download an exception report template and complete sections 1, 3 & 6 before telephoning the network lead centre.
4. Sections 5,7 – 9 should be completed by the referring unit consultant during/immediately the telephone call with the network lead centre consultant. Examples for exception from pathway;-
 - agreed with Lead Centre as clinically appropriate & why
 - transport availability
 - neonatal capacity within network
 - maternity capacity within network (IUT)
 - unit escalation status
 - Other (state)
5. Section 10 can be used for additional information such as any difficulties with locating a cot and/or arranging the transfer
6. 2 copies of the exception report should then be printed off
7. One copy should be sent to the newborn network office (***without section 2 completed***)
Email to: sarah.carnwell@nhs.net Or
Post to:
Staffordshire, Shropshire & Black Country Newborn Network
University Hospital of North Staffordshire Trust
1st Floor Admin Area
Maternity Centre
Newcastle Road
Stoke-on-Trent
ST4 6QG
8. The other copy should have section 2 completed, a copy of this should be faxed to the network lead centre for their records before filing the original in the baby's notes.

UHNS NNU Fax No. 01782 672142

RWH NNU Fax No: 01902 695032
9. If a review date with the network lead centre is set as part of the management plan then a second exception report form should be completed on the date of the review and the above steps followed again
10. It is hoped that the exception reporting process will be incorporated into the badger system in the future

Draft Parent Information Leaflets

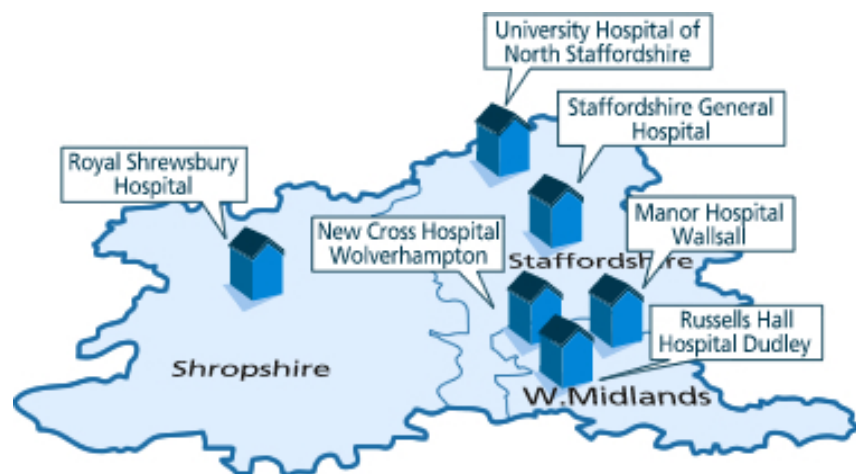
1 – Leaflet for Families who have been identified as baby needing neonatal care/ already admitted to neonatal unit

2 – Leaflet aimed for all women booking pregnancy in SSBC area, information also relevant for Primary Healthcare professionals who may not be aware of how neonatal services are organised within the SSBCNN

You have been given this information leaflet because your baby needs specialised care in a neonatal unit within the Staffordshire, Shropshire & Black Country Newborn Network. This will help you to understand how neonatal care is organised within the Staffordshire, Shropshire & Black Country Newborn Network and how this might affect you and your baby.

What is the Staffordshire, Shropshire & Black Country Newborn Network?

The Staffordshire, Shropshire and Black Country Newborn Network is one of approximately 24 Neonatal Networks across England. It consists of 6 Hospital Trusts working together to provide neonatal services for premature and sick babies and their families.



Care within our Network

Approximately 1 baby in 10 will need to be admitted to a Neonatal Unit after they are born. Of these babies, about 1 in every 10 will need full life support – this is called Intensive Care. The more premature the baby is the more likely they are to need intensive care. Other babies will need a lot of support and close observation – this is called High Dependency Care. Some babies will need less support but still more than can be provided on a normal post natal ward – this is called Special Care.

Within our network there are a total of 21 Intensive care, 18 High Dependency and 74 Special Care cots. The units in the Network provide different types of care for different groups of babies. All units work to the same Network standards to ensure continuity of care.

The different types of units in our Network are as follows:

Special Care Unit:	<ul style="list-style-type: none"> Staffordshire General Hospital
This hospital provides Special Care for babies at 32 weeks gestation and above	
Local Neonatal Unit:	<ul style="list-style-type: none"> Walsall Manor Hospital Russells Hall Hospital, Dudley Royal Shrewsbury Hospital
These hospitals provide Special and High Dependency care for all babies and a range of short term Intensive Care for all but the most extremely premature or extremely sick babies.	
Neonatal Intensive Care Unit:	<ul style="list-style-type: none"> New Cross Hospital, Wolverhampton University Hospital of North Staffordshire, Stoke on Trent
These hospitals provide the full range of Special, High Dependency and Intensive care for all babies.	
Surgical Care: Babies needing surgical or other specialist care not available in our network will be transferred to the nearest hospital with an available space , Birmingham Children’s Hospital provides care for the majority of our babies, Alder Hey Children’s Hospital, Liverpool, provides care for some babies in the North of our network.	

Transfers

To try to make sure that babies receive the care they need with the appropriate staff and equipment, we will need to transfer some women and /or babies to another unit in the Network. If your baby requires very specialist care we may even need to transfer to a specialist unit which is outside of the Network. All transfers will be planned and discussed with you.

Even if your delivery took place at the hospital in which you were booked, it may sometimes be necessary to transfer your baby in order to provide appropriate care for your baby or other babies within the Network, for example your baby may be transferred to a Local Neonatal Unit or Special Care Unit if your baby fits their criteria for care. Your baby will only be transferred to a unit that is able to provide the appropriate level of care your baby needs.

Transfer before birth

If your baby needs specialist care that is not available in the neonatal unit where you are booked to deliver then where ever possible an in utero transfer (transfer before birth) to a hospital with a neonatal unit able to provide the care your baby needs will be arranged. Sometimes a transfer is necessary because there is not a cot available. Your obstetrician and midwife will explain why the transfer is necessary and the process for this.

Transfer after birth

If your baby needs to be transferred to another hospital within the Network this will be done by a skilled transfer team. It is not usually possible for you to accompany your baby in the ambulance. The transfer team will introduce themselves to you and will explain how your baby will be transferred. They will inform you once the baby has arrived at the new unit. You will be reunited with your baby as soon as possible.

Transfers back to be closer to home

If your baby has been transferred to another hospital to receive specialist care not available at your hospital, once your baby is well enough and a cot is available, transfer to a hospital in the Network closer to home will be arranged.

For More Information Visit:

www.newbornnetworks.org.uk/staffs

Staffordshire, Shropshire & Black Country
Newborn Network 

Care for Premature & Sick Babies in the Staffordshire, Shropshire & Black Country Newborn Network



Better services for babies and families

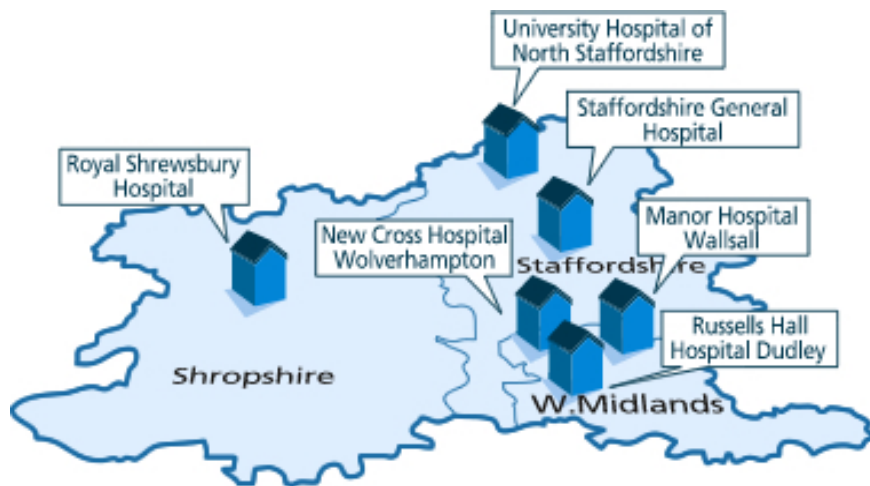
Parent Information Leaflet

You have been given this information leaflet as you have booked to have your baby at a maternity unit within the Staffordshire, Shropshire & Black Country Newborn and Maternity Network. This leaflet is to help you to understand how neonatal care your baby might need is organised within the Staffordshire, Shropshire & Black Country Newborn and Maternity Network.

Nearly all babies are born well and don't need special care however approximately 1 baby in 10 will need to be admitted to a Neonatal Unit after they are born. Of these babies, about 1 in every 10 will need full life support – this is called Intensive Care. The more premature the baby is, the more likely they are to need intensive care. Other babies will need a lot of support and close observation – this is called High Dependency Care. Some babies will need less support but still more than can be provided on a normal post natal ward – this is called Special Care.

What is the Staffordshire, Shropshire & Black Country Newborn and Maternity Network?

The Staffordshire, Shropshire and Black Country Newborn and Maternity Network consist of 6 Hospital Trusts working together to provide neonatal services for premature and sick babies and their families.



Care within our Network

Within our network there are a total of 21 Intensive Care, 18 High Dependency and 74 Special Care cots. The units in the Network provide different types of care for different groups of babies. All units work to the same Network standards to ensure continuity of care. The different types of units in our Network are as follows:

Special Care Unit:	<ul style="list-style-type: none"> Staffordshire General Hospital
This hospital provides Special Care for babies at 32 weeks gestation and above	
Local Neonatal Unit:	<ul style="list-style-type: none"> Walsall Manor Hospital Russells Hall Hospital, Dudley Royal Shrewsbury Hospital
These hospitals provide Special and High Dependency care for all babies and a range of short term Intensive Care for all but extremely premature or extremely sick babies.	
Neonatal Intensive Care Unit:	<ul style="list-style-type: none"> New Cross Hospital Wolverhampton University Hospital of North Staffordshire, Stoke on Trent
These hospitals provide the full range of Special, High Dependency and Intensive care for all babies.	
Surgical Care: Babies needing surgical or other specialist care not available in our network will be transferred to the nearest hospital with an available space . The Birmingham Children's Hospital provides care for the majority of our babies, Alder Hey Children's Hospital, Liverpool, provides care for some babies in the North of our network.	

Further useful information can be found at:

www.newbornnetworks.org.uk

Transfers

To try to make sure that babies receive the care they need with the appropriate staff and equipment, we will need to transfer some women and /or babies to another unit in the Network. If your baby requires very specialist care we may even need to transfer to a specialist unit which is outside of the Network. All transfers will be planned and discussed with you.

Even if your delivery took place at the hospital in which you were booked, it may sometimes be necessary to transfer your baby in order to provide appropriate care for your baby or other babies within the Network, for example your baby may be transferred to a Local Neonatal Unit or Special Care Unit if your baby does not require intensive care. Your baby will only be transferred to a unit that is able to provide the appropriate level of care your baby needs.

Transfer before birth

If your baby needs specialist care which is not available at the Neonatal Unit where you are booked to deliver then where ever possible an in utero transfer (transfer before birth) to a hospital with a neonatal unit able to provide the care your baby needs will be arranged. Sometimes a transfer is necessary because there is not a cot available. Your obstetrician and midwife will explain why the transfer is necessary and the process for this.

Transfer after birth

If your baby needs to be transferred to another hospital within the Network because your baby needs specialist care which is not available at the Neonatal Unit where you have delivered, or because there is not a cot available, this will be done by a skilled transfer team. It is not usually possible for you to accompany your baby in the ambulance. The transfer team will introduce themselves to you and will explain how your baby will be transferred. They will inform you once your baby has arrived at the new unit. You will be reunited with your baby as soon as possible.

Transfers back to be closer to home

Once your baby is well enough, transfer to a hospital in the Network closer to home will be arranged once a cot becomes available.

Staffordshire, Shropshire & Black Country 
Newborn and Maternity Network

Care for Premature & Sick Babies in the Staffordshire, Shropshire & Black Country Newborn and Maternity Network



Better services for babies and families

Parent and Primary Healthcare Professional Information Leaflet

Potential Impact to Maternity Pathways and Transfers for Neonatal Intensive Care

Staffordshire, Shropshire & Black Country Newborn Network

Changes have been proposed in the unit clinical thresholds to the criteria of care for some units within the Staffordshire, Shropshire & Black Country Newborn Network based on the unit designations previously agreed by WMSCG and the nationally agreed types of neonatal unit within the Toolkit for High-Quality Neonatal Services. These changes will result in some increase in transfers for neonatal medical intensive care and these are described below. The changes are recommended as these pathway thresholds will ensure high quality services in those units and across the network.

Shropshire

It is expected that babies less than 27⁺⁰ weeks gestation should receive their acute care within one of the two Network Lead Centres (RWH, UHNS).

Black Country

It is expected that babies less than 28⁺⁰ weeks gestation should receive their acute care at the Network Lead Centre at RWH.

Estimated impact of pathway thresholds

The estimated impact of the introduction of the pathway thresholds is based on 2009 activity by each unit for admission numbers per gestational age at admission.

Many factors impact on the accuracy of this assessment. For example; It does not include a review of the gestations of the babies admitted to the network lead centres which may show that currently the wrong babies (i.e. babies greater than 27/28 weeks gestation) are being admitted into these units either in-utero or postnatally because the clinical thresholds appropriate to the given unit designations are not currently being adhered to and therefore the local neonatal units are full and unable to keep babies within their clinical thresholds. Similarly the number of women to be transferred out in-utero may be greater than indicated because a number of in-utero transfers do not result in a delivery.

Mid Staffordshire Hospital

Thresholds

Gestation Limit	32 ⁺⁰
Ventilation	No
CPAP	6 Hours
TPN	No
Cooling	No
Return	32 ⁺⁰ When stable
Preterm Transfer In	32 ⁺⁰
Surgery	No

Transfer Activity	
Babies Transferred for IC	No change
IUT's	Increased by 20 *
Unit Inpatient Activity	
Intensive care (ventilation)	No change
High Dependency Care	No change
Special Care	No change

* Number of babies less than 32+0 admitted to SCU in 2009

Royal Shrewsbury Hospital

Thresholds

Gestation Limit	27 ⁺⁰
Ventilation	Yes
CPAP	Yes
TPN	Yes
Cooling	No
Return	27 ⁺⁰ When stable
Preterm Transfer In	27 ⁺⁰
Surgery	No

Transfer Activity	
Babies Transferred for IC	Increased by 10 per year
IUT's	Increased by 10 per year*
Unit Inpatient Activity	
Intensive care (ventilation)	No change or slight decrease
High Dependency Care	No change or slight increase
Special Care	No change or slight increase

* No. of babies less than 27⁺⁰ admitted to NNU In 2009

In 2009 16 women @ 27+weeks were transferred out in-utero and 35 transfers in @ 27+ weeks were refused due to lack of space on labour ward +/-or NNU at RSH

University Hospital of North Staffordshire

Thresholds

Gestation Limit	No Limit
Ventilation	Full Range
CPAP	Yes
TPN	Yes
Cooling	Yes
Return	When stable for transfer
Preterm Transfer In	All considered
Surgery	No

Transfer Activity	
Babies Transferred for IC	No Change
IUT's	No change
Unit Inpatient Activity	
Intensive care (ventilation)	Increased by 125 days approx
High Dependency Care	No Change
Special Care	No Change

Assuming 50% of IC transfer of babies less than 27⁺⁰ weeks transfers to UHNS from RSH

Walsall Manor Hospital

Thresholds

Gestation Limit	28 ⁺⁰
Ventilation	Yes
CPAP	Yes
TPN	Yes
Cooling	No
Return	28 ⁺⁰ When stable
Preterm Transfer In	28 ⁺⁰
Surgery	No

Transfer Activity	
Babies Transferred for IC	Increased by 10 per year
IUT's	Increased by 20 per year
Unit Inpatient Activity	
Intensive care (ventilation)	? No Change *
High Dependency Care	No Change
Special Care	No Change

Number of babies less than 28⁺⁰ admitted to NNU in 2009 some of which were transferred out for IC

* Need info on number of women transferred out IUT @ 28+ weeks and number of ex utero transfers 28+ weeks refused

Russell's Hall Hospital

Thresholds

Gestation Limit	28 ⁺⁰
Ventilation	Yes
CPAP	Yes
TPN	Yes
Cooling	No
Return	28 ⁺⁰ When stable
Preterm Transfer In	28 ⁺⁰
Surgery	No

Transfer Activity	
Babies Transferred for IC	Increased by 10 per year
IUT's	Increased by 20 per year
Unit Inpatient Activity	
Intensive care (ventilation)	? No Change *
High Dependency Care	No Change
Special Care	No Change

Number of babies less than 28⁺⁰ admitted to NNU in 2009 some of which were transferred out for IC

* Need info on number of women transferred out IUT @ 28+ weeks and number of ex utero transfers 28+ weeks refused

Royal Wolverhampton Hospital

Thresholds

Gestation Limit	No Limit
Ventilation	Full Range
CPAP	Yes
TPN	Yes
Cooling	Yes
Return	When stable for transfer
Preterm Transfer In	All considered
Surgery	No

Transfer Activity	
Babies Transferred for IC	No Change
IUT's	No Change
Unit Inpatient Activity	
Intensive care (ventilation)	Increased by 625 days approx
High Dependency Care	No Change
Special Care	No Change

Assuming 50% of IC transfer of babies less than 27⁺⁰ weeks transfers to RWH from RSH and all WMH and DGOH IC transfers of babies less than 28⁺⁰