London Neonatal
Operational Delivery Network

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South London Service Specification & Care Pathways

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London Neonatal ODN – South London Service Specification & Care Pathways

This document summarises the neonatal unit care thresholds and referral pathways, and provides detail on where babies should be cared for, across the South London Neonatal ODN.

The underlying aim of these care pathways is to support providers and commissioners of neonatal care in the network to ensure 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, and as close to home as possible. This is underpinned by a focus on clinical discussions, agreement and monitoring.
These pathways detail the clinical thresholds that are expected to be used in order to guide care and to clarify when discussions should take place.

Exception reporting

- The London ODN team and commissioners will expect exception reports to be completed prospectively on any babies who breach any of the care criteria detailed in these guidelines, specifically:
  - Babies below 27 weeks gestation, or birth weight <800g, who are cared for in an LNU or SCU;
  - Babies below 30 weeks gestation, or birth weight <1000g, who are cared for in a SCU
  - Babies who undergo therapeutic hypothermia in an LNU or SCU (apart from where therapeutic hypothermia is initiated prior to transfer to a network NICU)
  - Babies who have intensive care for longer than 48 hours in an LNU and are not transferred to a network NICU
  - Babies who have intensive care or high dependency care in a SCU
- In addition, all NICUs, LNUs and SCUs should provide exception reports for babies who remain inpatients on units beyond 44 weeks corrected gestation age
- Compliance with exception reporting will be monitored by the Network and Specialist Commissioners and exception reports discussed in the network Clinical Practice & Governance (CPG) meetings held quarterly.
- Units will be expected to provide clinical details of their exceptions at the network CPG meetings to inform discussions, provide assurance of compliance with these guidelines and help with network learning.
- Exception reporting does not replace prospective clinical discussion between SCUs, LNUs & NICUs, or the expectation that babies are transferred in a timely way in line with these guidelines.

1. NEONATAL UNITS AND LEVELS OF CARE IN SOUTH LONDON

Neonatal Intensive Care Units (NICU)
There are 3 hospitals which provide NICU care in the south London sector, all of which provide all levels of neonatal care, including high level intensive care, as detailed in section 5. They also provide a range of specialist and subspecialist care, as shown in section 2.

These hospitals are:
Evelina London Children's Hospital (ELCH) (part of Guy's & St Thomas' NHS Foundation Trust, GSTT)
King's College Hospital (KCH) (part of King's College Hospital NHS Foundation Trust)
St George's Hospital (SGH) (part of St George's University Hospitals NHS Foundation Trust)

Local Neonatal Units (LNUs)
There are 5 hospitals which provide LNU care in the south London sector, as detailed in section 4. These hospitals are:
University Hospital Lewisham (UHL) (part of Lewisham & Greenwich NHS Trust)
Queen Elizabeth Hospital (QEH) (part of Lewisham & Greenwich NHS Trust)
Kingston Hospital (KH)
Croydon University Hospital (CUH)
St Helier Hospital (SHH) (part of Epsom & St Helier University Hospitals NHS Trust)

Special Care Units (SCUs)
There are 2 hospitals which provide SCU care in the south London sector, as detailed in section 3. These hospitals are:
Princess Royal University Hospital (PRUH) (part of King's College Hospital NHS Foundation Trust)
Epsom Hospital (EH) (part of Epsom & St Helier University Hospitals NHS Trust)

2. SPECIALIST AND SUBSPECIALIST NEONATAL CARE FOR BABIES BORN OR EXPECTED TO BE BORN IN SOUTH LONDON

Medical specialties
Each of the hospitals with NICUs provides a range of paediatric medical specialities that support neonatal care.

Evelina London Children's Hospital

Switchboard	020 7188 7188
Neonatal Unit NICU registrar	020 7188 4045 Bleep 0241

Subspeciality	Daytime contact *(Call switchboard out of hours)*
Cardiology	Bleep 1344
Metabolic diseases	Bleep 1460
Nephrology	Phone 07990 800587
Neurology	Bleep 1148
Paediatric intensive care/STRS (including ECMO)	010 7188 5000
Radiology	Radiology Patient Flow coordinator on 020 7188 9216
Respiratory (includes LTV)	Reg bleep 1468; SHO bleep 3157 Attending consultant via switchboard
Clinical Genetics	Bleep 3169; Office ext 81364
Dermatology	Bleep 2010; Office ext 86399;
Endocrinology	Phone NNU for acute referrals Contact for endocrinology advice through switchboard
Gastroenterology	Bleep 1996
Haematology	Bleep 1621
Infectious diseases	Bleep 2009

King's College Hospital

Switchboard	02032999000
Neonatal Unit NICU registrar NICU consultant	0203299 3743/ Bleep 698 Bleep 690

Subspeciality	Contact
Gastroenterology Hepatology Paediatric intensive care	Registrar via switchboard EXT 34412/ 34441 /35960 Registrar Via switchboard EXT 32312/32314
Respiratory Dermatology Endocrinology Haematology Radiology (not 24 hours) Neurology	All via switchboard in hours only

St George's Hospital

Switchboard	020 8672 1255
Neonatal Unit NICU registrar Attending HDU and On call consultant	020 8725 1934 (sisters office) Bleep 6422 Bleep 8777 (out of hours mobile via switchboard)

Subspeciality	Contact
Clinical Genetics	020 8725 5335 (Genetics Secretary)
Dermatology	Bleep 8440 or secretary ext 2500
Endocrine	Secretary ext 2290
Gastroenterology (includes home PN)	Secretary ext 2290
Haematology	Bleep 7080 or ext 3921
Infectious diseases	Bleep 2113
Neurology	Bleep 7620
Oncology	Bleep 7755
Paediatric intensive care	02087251932 or Bleep 6890
Radiology	Ext 4197 (Paeds reception – ask for consultant)
Neuroradiology	Ext 4481 and 4544 (secretaries)
Respiratory (includes LTV)	07717 427482 (Attending consultant)

Surgical specialities
Each of the hospitals with NICUs provides a range of paediatric surgical specialities that support neonatal care.

Evelina London Children's Hospital

Subspeciality	Contact (Call switchboard out of hours)
General	Bleep 2505
ENT	Phone 07867 140175
Cardiothoracic	07717 047529
Cleft lip and palate	07884 182756
Dental	Contact switchboard
Ophthalmology	Secretary (daytime) ext 84334
Orthopaedic surgery	Contact NNU
Plastic surgery	Contact NNU
Urology	Bleep 1103 (daytime); Bleep 2505 (after hours) Secretary (daytime) ext 84610

King's College Hospital

Subspeciality	Contact
Switchboard	020 3299 9000
General	Bleep 822 (daytime) Wifi phone in/out of hours 07528977587
Neurosurgery	EXT 34207 Out of hours – call switchboard Online referral form https://nww.ihtl.nhs.uk/neurosurgery/

Ophthalmology	Via switchboard

St George's Hospital

Subspeciality	Contact
Dental	No on call – via switchboard
ENT	On call reg and cons via switch (specify paeds team needed)
General	Bleep 6763
Maxillofacial	Bleep 7340
Neurosurgery	Bleep 7242 or ask switch for paeds consultant
Ophthalmology	02087252062 (Secretary. Will direct urgent calls to on call consultant) ROP Laser – Call neonatal unit and also ask local ophthalmologist to contact Mr Lloyd Bender, Mr Mahi Muquit or Mr Colin Carter
Orthopaedic surgery	Bleep 6556 (Paeds Ortho)
Plastic surgery	Bleep 7050 (SHO). Reg Aircall via switch SG601
Urology	Bleep 6763

3. REGULAR NEONATAL PATHWAYS IN SOUTH LONDON

The diagram below shows the agreed regular referral pathways for higher care for hospitals in south London. Referrals will in general follow these pathways, but this may vary depending on cot availability. Availability of speciality medical and surgical input in the tertiary hospitals in south London is detailed in section 2.

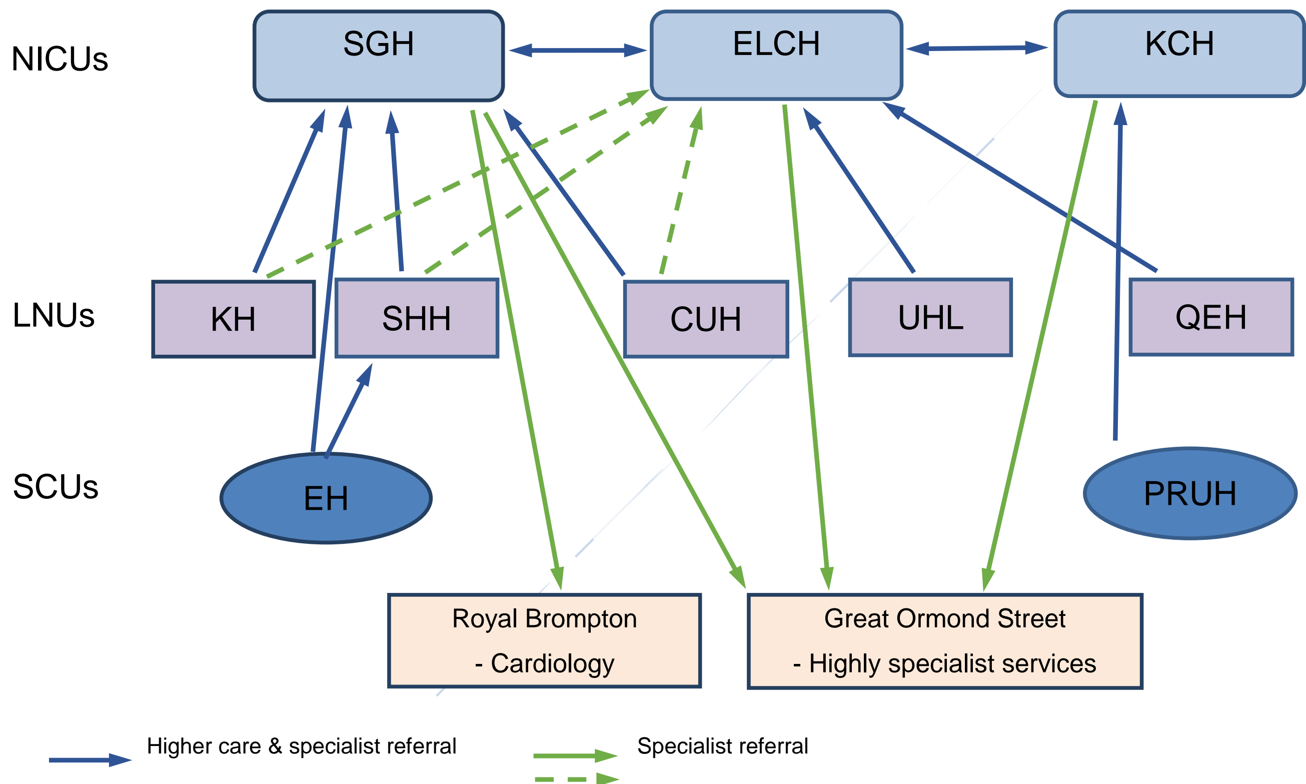
Further detail on referral pathways and expectations, including specialist referral pathways from non-NICU centres, are detailed in sections 4, 5 and 6.

Postnatal subspecialist referral pathways will, where possible, keep babies within the south London network in line with section 2 above. Exceptions to this include:

- Cardiac care for babies from south west London units to Royal Brompton Hospital
- Highly specialised services, unavailable in south London, to Great Ormond Street

Although antenatal referrals will often follow these pathways, alternative fetal medicine pathways exist between some hospitals.

Referrals should always involve discussion with and agreement of consultant neonatologists/ paediatricians on both sites.



4. SPECIAL CARE UNITS (LEVEL 1) (SCUs)

Princess Royal University Hospital (PRUH) (part of King's College Hospital NHS Foundation Trust)

The normal Network Perinatal Centre and NICU referral pathway for PRUH is to King's College Hospital (KCH).

Contact details for PRUH Neonatal Unit
Switchboard: 01689 863000
Neonatal Consultant: bleep 474
Neonatal Registrar: bleep 511
Direct line to SCBU: 01689 864956 or 864957
Neonatal office (Band 7 nurse): 01689 864391
Generic consultant email: kch-tr.br.pruhneonatalconsultants@nhs.net

Fetal anomaly

Cardiac anomaly

- Babies with an antenatal diagnosis of cardiac anomaly may deliver in PRUH if a postnatal management plan is in place that has been agreed the Fetal/Paediatric Cardiologist.
- It will be appropriate to deliver babies with some antenatally detected cardiac problems in a cardiac or network perinatal centre, based on the likelihood of requirement for neonatal intensive care and/or early cardiac intervention.
- In general, babies in south east London will be seen by a Fetal Cardiologist either at ELCH or KCH; and babies who require delivery at a network perinatal centre will deliver at ELCH. Postnatal cardiac care will, in general, be provided by ELCH.

Surgery

- Babies with antenatally identified surgical conditions likely to require early surgical review will normally be delivered in a unit with neonatal surgery facilities according to Fetal Medicine pathways, as follows:
    - General Neonatal Surgery may be delivered at KCH, ELCH or SGH
    - ENT will be delivered at ELCH or SGH
    - Urology will be delivered at ELCH or SGH
    - Neurosurgery will be delivered at KCH or SGH

Other congenital anomaly

- Babies with an antenatal diagnosis of other congenital anomaly may deliver in PRUH if a postnatal management plan is in place that has been agreed by Fetal Medicine and neonatal teams
- If the congenital abnormality is complex or likely to require early postnatal intervention, the baby will normally be delivered in a network perinatal centre

- If the congenital abnormality is thought likely to be lethal, an antenatal planning discussion should occur between fetal medicine, KCH and PRUH neonatal staff about the most appropriate place of delivery; and any palliative care needs.
- If the anomalies are likely to require the input of subspecialist team(s) available only at a particular hospital (eg cardiac at ELCH), then the fetal medicine, neonatal and subspecialist teams from that hospital must be involved in antenatal care planning

Gestation limit & care requirements

- Where possible, women in premature labour at PRUH at less than 30+0 weeks gestation or estimated fetal weight less than 1000g will be transferred to deliver in a network centre with a NICU; or a network LNU if over 27+0 weeks gestation and over 800g estimated fetal weight.
- If a baby below these gestation limits or birth weight is delivered at PRUH, the baby will be stabilised and assessed and appropriate arrangements put into place following discussion with the KCH NICU team.

Under 30 weeks gestation or birth weight less than 1000g

- Any baby of less than 30+0 weeks gestation or less than 1000g should normally be transferred to a network NICU if continuing intensive care is appropriate;
  or a network LNU if 27 weeks gestation or more and greater than 800g birth weight, requiring high dependency care and considered stable and unlikely to require escalation to intensive care.
- If there is doubt about necessity for transfer (e.g. baby dying, baby stable and on the edge of the unit pathway threshold), there will be consultant to consultant discussion with the KCH NICU team

30 weeks gestation and above and birth weight 1000g or above

Whether a baby of 30+0 gestation and above, and over 1000g birth weight should remain at PRUH depends upon where the care needs fall within the following criteria.
Initial advice should be sought from the NICU team at KCH, with onward referral for NICU care based on cot capacity.

- *Complex Intensive Care:*

Babies requiring respiratory support with symptoms of additional organ failure (e.g. hypotension, DIC, renal failure, metabolic acidosis), or babies with pneumothorax requiring thoracocentesis will need to be transferred to a network NICU and immediate consideration (within 4 hours of recognition) should be given to this.

- *Ventilation:*

Any baby continuing to require, or considered likely to require, conventional ventilation at 4 hours will normally be transferred to a network NICU.

- *HFOV, Nitric Oxide and ECMO*

Babies who are requiring, or are likely to require, HFOV or Nitric Oxide will need to be transferred to a network NICU and immediate consideration (within 4 hours of recognition) should be given to this.
If it appears likely that the baby will require ECMO, referral should be made to NTS for consideration for referral to either Great Ormond Street or ELCH ECMO service.

- *Non-invasive respiratory support (NIV) (CPAP & HFO2):*

Babies requiring NIV beyond 4 hours of age will need to be transferred to a network NICU; or a network LNU if considered stable and unlikely to require escalation to ventilation.

- *PN:* Babies requiring PN will normally need to be transferred to a network NICU; or LNU depending on other care requirements.

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

- *Cooling:* Newly born babies who require cooling for treatment of perinatal asphyxia will be transferred to a Network NICU.

Antenatal transfers into PRUH

Women in preterm labour at or above 30+0 weeks gestation and with estimated fetal weight of >1000g may be accepted into PRUH for delivery.

Postnatal transfers into PRUH

Babies born in other network hospitals (SCU, LNU or SCU) may be considered for transfer to PRUH if they are ≥30 weeks gestation, ≥1000g birth weight and require only special care.
However, should their care requirement escalate, transfer to an LNU or NICU, in line with these guidelines, would be expected.

Epsom Hospital (EH) (part of Epsom & St Helier University Hospitals NHS Trust)

The normal Network Perinatal Centre and NICU referral pathway for EH is SGH. The normal LNU referral pathway for EH is SHH.

Fetal anomaly

Cardiac anomaly

- Babies with an antenatal diagnosis of cardiac anomaly may deliver in EH if a postnatal management plan is in place that has been agreed the Fetal/Paediatric Cardiologist.
- It will be appropriate to deliver babies with some antenatally detected cardiac problems in a cardiac or network perinatal centre, based on the likelihood of requirement for neonatal intensive care and/or early cardiac intervention.
- In general, babies in south west London will be seen by a Fetal Cardiologist at St George's and babies who require delivery at a network perinatal centre will deliver at St George's. Postnatal cardiac care will, in general, be provided by Royal Brompton Hospital.

Surgery

- Babies with antenatally identified surgical conditions likely to require early surgical review will normally be delivered in a unit with neonatal surgery facilities according to Fetal Medicine pathways, as follows:
  - General Neonatal Surgery may be delivered at SGH, KCH or ELCH
  - ENT will be delivered at SGH or ELCH
  - Urology will be delivered at SGH or ELCH
  - Neurosurgery will be delivered at SGH or KCH

Other congenital anomaly

- Babies with an antenatal diagnosis of other congenital anomaly may deliver in EH if a postnatal management plan is in place that has been agreed by Fetal Medicine and neonatal teams
- If the congenital abnormality is complex or likely to require early postnatal intervention, the baby will normally be delivered in a network perinatal centre
- If the congenital abnormality is thought likely to be lethal, an antenatal planning discussion should occur between fetal medicine, SGH and EH neonatal staff about the most appropriate place of delivery; and any palliative care needs.
- If the anomalies are likely to require the input of subspecialist team(s) available only at a particular hospital (eg cardiac at ELCH), then the fetal medicine, neonatal and subspecialist teams from that hospital must be involved in antenatal care planning

Gestation limit & care requirements

- Where possible, women in premature labour at EH at less than 34+0 weeks gestation or estimated fetal weight less than 1800g will be transferred to deliver in a network centre with a NICU; or a network LNU if over 27+0 weeks gestation and over 800g estimated fetal weight.
- If a baby below these gestation limits or birth weight is delivered at EH, the baby will be stabilised and assessed and appropriate arrangements put into place following discussion with the SGH NICU team.

Under 34 weeks gestation or birth weight less than 1800g

- Any baby of less than 34+0 weeks gestation or less than 1800g should normally be transferred to a network NICU if continuing intensive care is appropriate;
  or a network LNU if 27 weeks gestation or more and greater than 800g birth weight, requiring high dependency care and considered stable and unlikely to require escalation to intensive care.
- If there is doubt about necessity for transfer (e.g. baby dying, baby stable and on the edge of the unit pathway threshold), there will be consultant to consultant discussion with the SGH NICU team

34 weeks gestation and above and birth weight 1800g or above

Whether a baby of 34+0 gestation and above, and over 1800g birth weight should remain at EH depends upon where the care needs fall within the following criteria.
Initial advice should be sought from the NICU team at SGH, with onward referral for NICU care based on cot capacity.

- *Complex Intensive Care:*
  Babies requiring respiratory support with symptoms of additional organ failure (e.g. hypotension, DIC, renal failure, metabolic acidosis), or babies with pneumothorax requiring thoracocentesis will need to be transferred to a network NICU and immediate consideration (within 4 hours of recognition) should be given to this.

- *Ventilation:*
  Any baby continuing to require, or considered likely to require, conventional ventilation at 4 hours will normally be transferred to a network NICU.
  If a baby is considered to be likely to require ventilation for <48 hours, after discussion with SGH NICU team, consideration can be given to transfer of the baby to SHH.

- *HFOV, Nitric Oxide and ECMO*
  Babies who are requiring, or are likely to require, HFOV or Nitric Oxide will need to be transferred to a network NICU and immediate consideration (within 4 hours of recognition) should be given to this.
  If it appears likely that the baby will require ECMO, referral should be made to London Neonatal Transfer Service for consideration for referral to either Great Ormond Street or ELCH ECMO service.

- *Non-invasive respiratory support (NIV) (CPAP & HFO2):*
  Babies requiring NIV beyond 4 hours of age will need to be transferred to a network NICU; or a network LNU if considered stable and unlikely to require escalation to ventilation.

- *PN:* Babies requiring PN will normally need to be transferred to a network NICU; or LNU depending on other care requirements.

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

Cooling: Newly born babies who require cooling for treatment of perinatal asphyxia will be transferred to a Network NICU.

Antenatal transfers into EH

Women in preterm labour at or above 34+0 weeks gestation and with estimated fetal weight of >1800g may be accepted into EH for delivery.

Postnatal transfers into EH

Babies born in other network hospitals (SCU, LNU or SCU) may be considered for transfer to EH if they are ≥34 weeks gestation, are ≥1800g birth weight and require only special care.
However, should their care requirement escalate, transfer to an LNU or NICU, in line with these guidelines, would be expected.

5. LOCAL NEONATAL UNITS (LEVEL 2) (LNUs)

University Hospital Lewisham (UHL) (part of Lewisham & Greenwich NHS Trust)
Queen Elizabeth Hospital (QEH) (part of Lewisham & Greenwich NHS Trust)
Kingston Hospital (KH)
Croydon University Hospital (CUH)
St Helier Hospital (SHH) (part of Epsom & St Helier University Hospitals NHS Trust)

Contact details

UHL Direct line to NNU Switchboard	 020 8333 3139/3140 020 8333 3000
QEH Direct line to NNU Switchboard	 020 8836 4531 020 8836 4360
KH Direct line to NNU Switchboard	 020 8546 7711 ext: 2421 or 2420 020 8546 7711
CUH Direct line to NNU Switchboard	 020 8401 3191 020 8401 3000
SHH Direct line to NNU Switchboard	 020 8296 2885 020 8296 2000

The normal Network Perinatal Centre and NICU referral pathway for UHL and QEH is ELCH.
The normal Network Perinatal Centre and NICU referral pathway for KH, CUH and SHH is SGH.

Fetal anomaly

Cardiac anomaly

- Babies with an antenatal diagnosis of cardiac anomaly may deliver in an LNU if a postnatal management plan is in place that has been agreed the Fetal/Paediatric Cardiologist.
- It will be appropriate to deliver babies with some antenatally detected cardiac problems in a cardiac or network perinatal centre, based on the likelihood of requirement for neonatal intensive care and/or early cardiac intervention.
- In general, babies in south east London will be seen by a Fetal Cardiologist either at ELCH or King's; and babies who require delivery at a network perinatal centre will deliver at GSTT/ELCH.
- In general, babies in south west London will be seen by a Fetal Cardiologist at St George's and babies who require delivery at a network perinatal centre will deliver at St George's.

Surgery

- Babies with antenatally identified surgical conditions likely to require early surgical review will normally be delivered in a unit with neonatal surgery facilities according to Fetal Medicine pathways, as follows:
    - General Neonatal Surgery may be delivered at KCH, ELCH or SGH
    - ENT will be delivered at ELCH or SGH
    - Urology will be delivered at SGH or ELCH
    - Neurosurgery will be delivered at SGH or KCH

Other congenital anomaly

- Babies with an antenatal diagnosis of other congenital anomaly may deliver in an LNU if a postnatal management plan is in place that has been agreed by Fetal Medicine and neonatal teams
- If the congenital abnormality is complex or likely to require early postnatal intervention, the baby will normally be delivered in a network perinatal centre
- If the congenital abnormality is thought likely to be lethal, an antenatal planning discussion should occur between fetal medicine, NICU and LNU neonatal staff about the most appropriate place of delivery; and any palliative care needs.
- If the anomalies are likely to require the input of subspecialist team(s) available only at a particular hospital (eg cardiac at ELCH), then the fetal medicine, neonatal and subspecialist teams from that hospital must be involved in antenatal care planning

Gestation limit & care requirements

- Where possible, women in premature labour at less than 27+0 weeks gestation and/or with estimated fetal weight of less than 800g will be transferred to deliver in a Network Perinatal Centre.
- If a baby below this gestation limit or birth weight is delivered at the LNU, the baby will be stabilised and assessed and appropriate arrangements put into place following discussion with the network NICU. Initial stabilisation will be led by the consultant paediatrician/ neonatologist on service at the LNU and referral discussions are expected to be between LNU and NICU consultants.
- Each LNU has a primary referral pathway to a preferred NICU:
    - UHL to ELCH
    - QEH to ELCH
    - KH to SGH
    - CUH to SGH
    - SHH to SGH

Under 27 weeks gestation or birth weight less than 800g

- Any baby of less than 27+0 weeks gestation or less than 800g birth weight should normally be transferred to a network NICU if continuing intensive care is appropriate.
- If there is doubt about necessity for transfer (e.g. baby dying, baby stable and on the edge of the unit pathway threshold), there will be consultant to consultant discussion with the network NICU.

27 weeks gestation and above and birth weight 800g or above

Whether a baby of 27+0 gestation, and above, and over 800g birth weight should remain at LNU depends upon where the care needs fall within the following criteria:

- *Complex Intensive Care:*

Babies requiring respiratory support with symptoms of additional organ failure (e.g. hypotension, DIC, renal failure, metabolic acidosis), or babies with pneumothorax requiring thoracocentesis will need to be transferred to a network NICU and immediate consideration (within 4 hours of recognition) should be given to this.

- *Ventilation:*

If a preterm baby of 27 weeks' gestation or above requires conventional ventilation at 48 hours of age, the baby will be discussed with the attending consultant of the primary network referral NICU and may require transfer out to a NICU.

Should a decision be made at 48 hours that it is appropriate for a baby to remain in the LNU, any baby who continues to require IPPV for more than 5 days will be discussed again with the primary network referral NICU and will usually require transfer to a NICU at that point.

- *HFOV, ECMO and Nitric Oxide*

Babies who are requiring, or are likely to require, HFOV or Nitric Oxide will need to be transferred to a network NICU and immediate consideration (within 4 hours of recognition) should be given to this.If it appears likely that the baby will require ECMO, referral should be made to NTS for consideration for referral to either Great Ormond Street or ELCH ECMO service.

- *Non-invasive respiratory support (NIV) (CPAP & HFO2):*

Babies requiring NIV alone are classified as receiving high dependency care, and will, under normal circumstances, be managed in the LNU.

- *PN:* Babies requiring PN alone are classified as receiving high dependency care, and will, under normal circumstances, be managed in the LNU.

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

- *Cooling:* Newly born babies who require cooling for treatment of perinatal asphyxia will be transferred to a NICU.

Antenatal transfers into LNUs

Women in preterm labour at or above 27+0 gestation and with estimated fetal weight of >800g may be accepted into LNUs for delivery.

Postnatal transfers into LNUs

Babies born in other network hospitals (NICU, LNU or SCU) may be considered for transfer to UHL, CUH, KH and SHH if they are ≥27 weeks gestation, >800g birth weight and

- Require, or are likely to require, short term ventilation (<48 hours) without other criteria for complex intensive care (as set out above); or
- Require high dependency care.

However, should their care requirement escalate, transfer to a NICU, in line with these guidelines, would be expected.

Babies born in other network hospitals (SCU, LNU or SCU) may be considered for transfer to QEH if they are ≥27 weeks gestation, >800g birth weight and require high dependency care. However, should their care requirement escalate, transfer to a NICU, in line with these guidelines, would be expected.

6. NEONATAL INTENSIVE CARE UNITS (LEVEL 3) (NICUs)

Evelina London Children's Hospital (ELCH) (part of Guy's & St Thomas' NHS Foundation Trust)
King's College Hospital (KCH) (part of King's College Hospital NHS Foundation Trust)
St George's Hospital (SGH) (part of St George's University Hospitals NHS Foundation Trust)

Fetal anomaly

- Babies with an antenatal diagnosis of cardiac or other congenital anomaly will deliver in the any of the network perinatal centres, if an agreed postnatal management plan is in place.
- Babies with antenatally identified surgical conditions will normally be delivered at any of the network perinatal centres.
- Following input from a Fetal Cardiologist, it will be appropriate to deliver babies with some antenatally detected cardiac problems at Evelina, based on the likelihood of requirement for early cardiac intervention.
- Babies with antenatally diagnosed congenital airway anomalies likely to require immediate postnatal intervention will deliver at SGH or ELCH
- Babies with antenatally diagnosed congenital neurosurgical anomalies likely to require immediate postnatal intervention (eg spina bifida, hydrocephalus) will deliver at KCH or SGH

Gestation limit

As Network Perinatal Centres and NICUs, KCH, ELCH and SGH shall treat babies of the entire gestational age spectrum from 23+0 weeks.

Criteria for care at network NICUs

Complex Intensive Care: Babies requiring respiratory support with symptoms of additional organ failure (e.g. hypotension, DIC, renal failure, metabolic acidosis) will remain at the NICU
Ventilation, HFO, Nitric Oxide, NIV: Babies receiving all ventilatory modalities shall be suitable for treatment at the NICU.
ECMO: Babies who require, or are expected to require, ECMO will need to be transferred to an ECMO centre. ECMO in London is currently commissioned at Great Ormond Street and is also available at ELCH PICU.
Surgery: Babies who require surgery or a surgical opinion can be managed at any network NICU.
Cooling: Newly born babies who require cooling for treatment of perinatal asphyxia can be managed at any network NICU.

Suspected Cardiac/PDA Cases

- For babies at KCH, where a cardiac problem (not PDA for ligation) is suspected/diagnosed, referral should initially be made to the Paediatric Cardiologists at ELCH. Subsequent discussion should take place with the ELCH NICU to discuss clinical details and arrange a cot if appropriate.
- For babies at SGH, where a cardiac problem (not PDA for ligation) is suspected/diagnosed, referral should initially be made to the Paediatric Cardiologists at the Royal Brompton Hospital. Subsequent discussion should take place with the Brompton ITU to discuss clinical details and

arrange a cot if appropriate. Where the baby has other complications, such as other congenital anomalies or prematurity, referral to ELCH will be considered.

- Referral for PDA ligation at all hospitals in south London should be made directly to Evelina NICU

Glossary

Network perinatal centre: hospital that provides specialist maternity and fetal medicine care on the same site as a NICU
Neonatal intensive care
Neonatal high dependency care
Neonatal special care
NICU: Neonatal Intensive Care Unit
LNU: Local Neonatal Unit
SCU: Special Care Unit
GSTT: Guy's & St Thomas' NHS Foundation Trust
ELCH: Evelina London Children's Hospital
KCH: King's College Hospital
SGH: St George's Hospital
UHL: University Hospital Lewisham
QEW: Queen Elizabeth Hospital Woolwich
CUH: Croydon University Hospital
KH: Kingston Hospital
SHH: St Helier Hospital
EH: Epsom Hospital
PRUH: Princess Royal University Hospital