Scottish Perinatal Network Transport Group

In-Utero Transfers in Scotland

Consultant Led Unit to Consultant Led Unit

DOCUMENT CONTROL SHEET

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Full membership of the In-Utero Transport working group, and the Transport Oversight Group, who contributed to the development of these standards, can be found in the appendix.

Revision History:

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DISCLAIMER
The recommendations in this pathway represent the view of the Network, arrived at after careful consideration of the evidence available. When exercising their clinical judgement, healthcare professionals are expected to take this pathway fully into account, alongside the individual needs, preferences and values of their patients or the people using their service. It is not mandatory to follow the pathway recommendations and it remains the responsibility of the healthcare professional to make decisions appropriate to the circumstances of the individual, in consultation with them and their families and carers or guardian.

Introduction

The outcome following birth of a sick and/or preterm infant is improved if birth occurs in the same unit staffed and equipped to provide the required level and type of neonatal care. In utero transfer is safer than neonatal transfer. This applies particularly to infants of low gestation. Given the disruption to the life of the parent(s) and their family, it is important that unnecessary transfers are kept to a minimum, whilst those transfers where birth is likely within a few days of transfer are facilitated efficiently.

In all cases, whilst neonatal considerations are important, maternal safety is the priority and therefore good communication between midwifery, obstetric and neonatal staff on both sides of the proposed transfer is essential. A discussion with parents should be had to inform them of the unit most appropriate to their clinical needs, considering their social needs where appropriate and acknowledging that capacity will inform the final decision. Safe, timely and efficient transfer is of highest importance.

General Guidance

All Cases:

- The need for transfer should be discussed with the parents
- Transfer decision should be made by the referring unit consultant obstetrician and consultant neonatologist/paediatrician prior to arranging transfer.
    - In highly complex cases or where there is uncertainty that in-utero transfer is appropriate clinically for the woman, in-person consultant to consultant discussion is recommended.
- Consultant to consultant handover will occur whenever possible
- It is recognised that there are circumstances (e.g. out of hours) where the resident senior obstetrician/neonatal doctor will have more relevant information than a non-resident consultant. The staff member with best information should be involved in the discussion
    - In this case the resident senior obstetrician/neonatologist can discuss the transfer with the receiving unit, provided it has first been discussed with their own consultant. The final decision on which unit the woman is transferred to is made in collaboration between all relevant professionals in the referring and receiving units.
- It is essential that both transferring and receiving consultants are fully informed about the transfer
- The senior obstetrician may not be available e.g. other emergency work and so the discussion role can be deputised as per local arrangements e.g. to a senior midwife
- Where there is a significant delay between agreeing an IUT is indicated and the transfer taking place, a repeat multidisciplinary discussion or check-in should occur to ensure that transfer remains appropriate, e.g. every four hours until transfer, or sooner if there are clinical concerns
- Consideration may be given to alternatives to IUT such as creating cot capacity at the index site by collaborative discussion between teams and ScotSTAR to explore if more stable babies within that unit could be moved ex-utero for on-going neonatal care

Staff at the referring hospital need to balance the risks for both mother and baby of the transfer against the potential benefits. Compromising maternal health or a significant risk of birth en-route would be an absolute contraindication to transfer, and consideration should then be given to birth on site, immediate stabilisation and a post-natal ex-utero transfer.

ONCE TRANSFER DECISION MADE, TO ARRANGE A TRANSFER:

- The in-utero co-ordination service (ICS) is called on 03333990210
- ICS contact appropriate unit to identify maternal and neonatal capacity
- Once capacity confirmed then ambulance transport will be arranged by ICS
- ICS conference call will be set up with receiving obstetrician and neonatologist. If the senior obstetrician is not available a senior midwife should take this role. If the neonatal consultant not available, then the senior resident NICU clinician would be an appropriate deputy

INDICATIONS FOR TRANSFER – list is not exhaustive

- High risk of preterm birth in a unit where optimal level care not available
- Anticipated need for neonatal care at a level higher than available locally for any reason, e.g. surgical conditions
- Maternal Indication e.g. worsening pre-eclampsia or a pre-existing maternal cardiac condition, where optimal level care not available locally
- Specialist Neonatal/Paediatric Services e.g. known fetal anomaly requiring birth in a specific unit as defined in neonatal management plan where possible
- Maternal bed/cot capacity or staffing related to above

CONTRAINDICATIONS TO TRANSFER

- Mother requiring stabilisation
- Active vaginal bleeding
- Fetal distress
- Established labour – such that birth before arrival in receiving unit considered likely

GENERAL CONSIDERATIONS FOR TRANSFER

- Women should be supported by a midwife during the transfer who will provide relevant care en-route and conduct handover at the receiving unit. There is no requirement for medical staff either obstetric or neonatal/paediatric. If there is sufficient concern that medical staff are required for transfer, then the condition of the woman or baby is likely such that birth should occur locally, and postnatal ex-utero transfer arranged.
- A basic neonatal resuscitation kit should be taken on transfer
    - ✓ Plastic bag, hats, transwarmer, neonatal stethoscope, towels/blankets, delivery pack, NLS algorithm, appropriately sized bag and mask, saturation monitor
- An adequately staffed cot and bed must be available at receiving hospital
- Following the consultant-to-consultant discussion via ICS and suitability for transfer agreed, then speed of response from SAS should also be agreed
- Ensure Preterm Perinatal Wellbeing Package (PPWP) completed and transferred

SPECIFIC CONSIDERATIONS FOR TRANSFER

PRETERM LABOUR

The diagnosis of preterm labour can be very difficult. Waiting for regular painful uterine activity and cervical dilatation may result in diagnosis of labour being delayed which could prevent a safe and timely transfer. However transferring too soon will result in some unnecessary transfers. Additional testing should be utilised wherever possible by way of the QUiPP® APP scoring tool and the risk assessment chart below. All units should employ:

- QUiPP® APP scoring tool using:
    - Quantitative Fetal Fibronectin (qfFN) testing
      AND/OR
    - Cervical length scanning

If the QUiPP® APP suggests a very low chance of birth < 7 days, then transfer may be avoided. However testing must always be used in conjunction with clinical judgement and consideration of the obstetric history.

Risk Assessment Table

Probability of spontaneous birth <7 days by QUiPP	Risk of adverse outcome if birth occurs in referral unit		
	LOW*	MEDIUM**	HIGH***
<5%	Transfer not recommended 	Transfer not recommended 	Transfer to be discussed with local tertiary maternity unit 
5-10%	Transfer not recommended 	Transfer to be discussed with local tertiary maternity unit 	Transfer recommended 
>10%	Transfer recommended 	Transfer recommended 	Transfer recommended 

*LOW – Woman in unit with optimal neonatal support for gestational age of pregnancy, but neonatal unit has emergency capacity only

**MEDIUM – Woman in unit with neonatal support one level of acuity less than optimal for gestational age of pregnancy (i.e. a Local Neonatal Unit (LNU) where gestational age indicates Neonatal Intensive Care Unit (NICU) care required)

***HIGH - Woman in unit with no neonatal support or of a level of acuity two less than optimal for gestational age of pregnancy (i.e. a Special Care Unit (SCU) where gestational age indicates NICU care required)

This guidance will never be expected to override clinical judgement regarding the need for transfer and is only intended to apply to women presenting with a risk of spontaneous pre-term birth (PTB).

This does not apply to women at risk of iatrogenic PTB (for example for the management of pre-eclampsia) where a more complex risk assessment will be required.

Levels of Neonatal Care

SCU – Special Care Unit - This is for babies who do not need intensive care. Often, this will be for babies born after 32 weeks' gestation.

LNU – Local Neonatal Unit - Babies who need a higher level of medical and nursing support are cared for here. Babies born between 27- and 32-weeks' gestation may be transferred to an LNU.

NICU – Neonatal Intensive Care Unit - This is the level of care for babies with the highest need for support. Often these babies will have been born before 27 weeks' gestation (for singletons, <28 weeks for multiples) or be very unwell after birth.

Pre-Birth Optimisation

Steroid Administration

Steroids should be administered if birth is anticipated within the next 7 days, as per the HIS MCQIC Preterm Perinatal Wellbeing Package (PPWP).

22+0 -34+6 weeks gestation- antenatal steroids will generally be commenced if transfer is planned for anticipated imminent birth.

Magnesium sulphate

Administration of magnesium sulphate therapy in accordance with the HIS MCQIC Preterm Perinatal Wellbeing Package (PPWP) prior to transfer and should be considered if birth <30+0 weeks is anticipated. A loading dose then maintenance should be administered whilst waiting for transfer, administration should be discontinued for transfer and then a new infusion commenced at the receiving hospital. The aim is for a minimum of 4 hours infusion prior to birth.

Tocolytics

The use of tocolytics for the transfer may be considered at consultant level.

Further cervical assessment prior to transfer

A cervical assessment is recommended immediately prior to departure if at risk of spontaneous preterm birth and should be offered to the woman.

Ensure local guidelines for preterm labour, steroids, magnesium sulphate, etc are adhered to.

Maternal Indication

Ensure the mother is fit for transfer including MEWS and review at regular intervals including immediately prior to departure. In general, due to their unique ability to provide a hands-on assessment of the woman, the referring clinician's decision regarding the safety and suitability of transfer should be respected.

Infection Assessment

Ensure a clinical risk assessment tool (maternal risk of multi-resistant bacteria) is used and microbiology screening results are chased and shared with the receiving unit. Ensure receiving unit is aware of any outstanding microbiological investigations, and whether mother or baby require isolation due to exposure to resistant organisms.

Special Considerations

Preterm Premature Rupture of Membrane (PPROM)

These cases can be a particular challenge when trying to make an accurate prediction of impending birth.

- Amniotic fluid testing e.g. Amnisure® could be employed to optimise diagnosis if uncertain, senior involvement and review will aid decision making.
- If there is a high chance of rapid birth, ex-utero transfer may be the safest option. However, these babies can be challenging to stabilise, especially if ruptured membranes occur at <24 weeks, so birth in a NICU should always be considered.
- Where ex-utero transfer is considered, remote support on optimising neonatal condition pre-birth & resuscitation will be provided by the receiving neonatal team/ScotSTAR, as per local pathways.

Extreme Preterm Infants

In the event of suspected preterm birth at 22+0 – 23+6 weeks gestation, please also refer to the suite of guidance relating to the Management of the Extreme Preterm Infant created by the National Neonatal Network where relevant.

<24 weeks gestation steroids and magnesium sulphate will be administered as above, after an agreement is made to provide survival focused care following discussion with a consultant obstetrician, paediatrician and the parents. In general at 22/23 weeks when transfer for survival focussed neonatal care is undertaken steroids and magnesium sulphate will be administered. Where local expertise is limited or no consultant obstetrician/neonatologist on site then advice should be obtained from the receiving specialists.

Special Care Needs Identified Antenatally

Women and babies with antenatally identified special needs (e.g. cardiac conditions) requiring birth in a specific unit/type of unit should have this arranged antenatally and a plan clearly documented on their BadgerNet (or equivalent) record. This should include contact information for the planned receiving unit, so that when these women present and birth is likely to occur within 7 days this care plan can be enacted, and the woman transferred to the previously identified and agreed unit. In the event of this the agreed receiving unit should be notified of the imminent transfer.

Once Transfer Decision Made:

- The in-utero co-ordination service (ICS) is called on 03333990210
- ICS contact appropriate unit to identify maternal and neonatal capacity
    - It is recommended that Health Boards develop a system which allows a single point of contact (SPOC) to have the relevant information on capacity, to speak to ICS on behalf of both maternity and neonatal services, and inform ICS of the contact details for this person/role.
- Once capacity confirmed then ambulance transport will be arranged by ICS
- ICS conference call will be set up with receiving obstetrician and neonatologist. If senior obstetrician not available a senior midwife should take this role. If neonatal consultant not available, then senior resident NICU clinician would be an appropriate deputy
- Confirm transfer destination with parents and birth partners, and provide a postcode and travel instructions to the receiving hospital, and relevant patient information on neonatal care (e.g. "Information For Pregnant Women" leaflet on the SPN website)
- Identify midwife accompanying transfer and arrange their safe return transportation
- Where needed print out maternity notes including any special features
- Referring unit to complete appropriate transfer document, including all pertinent information for the receiving unit.
- Ensure parents have the relevant information for claiming expenses, where appropriate
- Perform final assessment of mother and baby immediately prior to transfer

FLOWCHART

Scottish Perinatal Network
Once for Scotland In-Utero Transfer Pathway

Referring unit maternity and neonatal teams determine by clinical assessment that transfer is indicated and discuss this with parents/birth partners

Referring unit call In-Utero Coordination Service (ICS): **03333 990 210**

Details required:
Referrer's name and site
Patient's name and identifiers

ICS Team establish capacity at appropriate unit

ICS arrange appropriate transportation

ICS arrange conference call between referring and receiving teams

While awaiting transfer, referring unit:

- Provide travel instructions and contact details of receiving hospital to parents/birth partners
- Identify accompanying midwife and arrange their return transportation
- Complete appropriate paperwork for transfer
- Ensure parents have information for claiming expenses
- Reassess the woman and baby immediately prior to transfer, including (where appropriate) a cervical assessment

APPENDIX:

MEMBERSHIP OF THE IN-UTERO TRANSFER WORKING GROUP, A SUB-GROUP OF THE TRANSPORT OVERSIGHT GROUP

Name	Profession	Health Board/ Organisation
Alan Martin	Paramedic and Patient Experience Manager	Scottish Ambulance Service
Andrew MacLaren	Consultant Neonatologist	NHS Greater Glasgow & Clyde / ScotSTAR
Angie Adams	Clinical Midwifery Manager	NHS Dumfries & Galloway
Anne-Sophie Hoffmoen	Programme Support Officer	NHS NSS (SPN/NMN)
Carsten Mandt	Senior Programme Manager	NHS NSS (SPN)
Christina Marshall	Charge Midwife	NHS Lothian
Clair Wright	Area Service Manager (West)	Scottish Ambulance Service
David Quine	Consultant Neonatologist	NHS Lothian
Dawn Kernaghan	Consultant Obstetrician	NHS Greater Glasgow & Clyde
Jennie Wild	Digital Midwife, Clinical Lead Midwife for National Maternity Network	NHS Highland
Karen Shields	Specialist Services Manager	Scottish Ambulance Service
Kirsty Dundas	Consultant Obstetrician	NHS Lothian
Laura Boyce	Head of Midwifery	NHS Dumfries & Galloway
Laura Brown	Programme Manager	NHS NSS (NMN)
Lauren Flett	Midwife Sonographer	NHS Orkney
Lesley Jackson	Consultant Neonatologist, Clinical Lead Neonatologist for National Neonatal Network	NHS Greater Glasgow & Clyde
Lesley McArthur	Senior Charge Midwife	NHS Highland
Moraig Rollo	Regional Clinical Quality Lead (East)	Scottish Ambulance Service
Nicola McGovern	Lead Midwife	NHS Highland
Priti Nagdeve	Consultant Obstetrician	NHS Grampian
Steven Hunter		Scottish Ambulance Service
Surindra Maharaj	Consultant Obstetrician	NHS Lanarkshire
Tara Fairley (Chair)	Consultant Obstetrician, Clinical Lead Obstetrician for National Maternity Network	NHS Grampian
Tom McEwan	Principal Educator: Women, Children, Young People and Families	NHS Education for Scotland

MEMBERSHIP OF THE TRANSPORT OVERSIGHT GROUP NOT LISTED ABOVE:

Name	Profession	Health Board/ Organisation
Alan Mathers	Consultant Obstetrician / Clinical Director	NHS Greater Glasgow & Clyde
Alison Wright	Senior Nurse, ANNP / Vice Chair of SNNG	NHS Tayside
Allan Jackson	Consultant Neonatologist	NHS Greater Glasgow & Clyde /ScotSTAR
Amy Brown	Best Start Policy Officer	Scottish Government
Angela Watt	Lead Midwife, Clyde	NHS Greater Glasgow & Clyde
Ben Stenson	Consultant Neonatologist	NHS Lothian

Birgit Wefers	Consultant Neonatologist	NHS Tayside
Catriona Dreghorn	Midwifery Operational Manager	NHS Highland
Emma Thompson	Programme Manager, National Neonatal Network	NHS NSS
Evelyn Ferguson	Consultant Obstetrician	NHS Lanarkshire
Gillian Burdge	Clinical Risk Midwife	NHS Greater Glasgow & Clyde
Hannah Kendrew-Jones	GRID Trainee	NHS Highland
Hilary Macpherson	Clinical Director of Obstetrics	NHS Orkney
Iona Duckett	Senior Midwife / Midwifery Advisor to SG	NHS Tayside
Jacquie Whitaker	Head of Midwifery	NHS Shetland
Jaki Lambert	Director for Scotland	Royal College of Midwives
Jennifer Boyd	Consultant Obstetrician	NHS Fife
Justine Craig	Chief Midwifery Officer	Scottish Government
Karen McAlpine	Senior Educator	NHS Education for Scotland
Kate Boyle	Senior Midwife – Neonatal and Transitional Care	NHS Lanarkshire
Kirstie Campbell	Head of Maternal & Infant Health	Scottish Government
Leah Noble	Senior Midwife – Inpatient Services	NHS Lanarkshire
Leena Thomas	Consultant Obstetrician	NHS Highland
Mahmoud Montasser	Consultant Neonatologist	NHS Lanarkshire
Michelle Mackie	Head of Midwifery	NHS Orkney
Pamela Connolly	SNNG	Scottish Ambulance Service
Shona Finch	Clinical Nurse Manager	NHS Borders
Shubhro Mullick	Consultant Pediatrician	NHS Western Isles
Stephanie Gardiner	Midwifery SCM	NHS Fife
Victoria Flanagan	Consultant Obstetrician	NHS Greater Glasgow & Clyde
Yvonne Gibson	ANNP – Neonatal Transport	Scottish Ambulance Service

This and other guidance and pathways created under through the Scottish Perinatal Network can be found on the Guidance segment of the SPN Website.