



Management of acute in-utero transfers: a framework for practice

Introduction

This document refers to the management of acute in-utero transfer (IUT). It does not deal with elective transfer of care or the on-going management following the routine detection of fetal anomalies. It is intended as a framework to inform development of local network guidelines.

Approximately 25% of women will remain undelivered 96 hours after in-utero transfer and this figure may be even higher for some groups, for example spontaneous labour with intact membranes. To avoid multiple in-utero transfers of the same mother, which is clearly a source of significant stress and anxiety for parents, the rationale for transfer has to be clear and the final decision made at consultant obstetric level.

The management of patients with regard to in-utero transfer should however include consultant obstetric and senior neonatal staff in addition to the most senior midwife available, at both the referring and (potential) receiving units. This must include an assessment of the relative benefits and risks of transfer to both maternal and fetal health.

Communication between *all* parties at both hospitals including the mother is critical. There must be clear and agreed delineation as to who is responsible for maternal care at each stage of the transfer process. The receiving unit should clarify on-going care plans as soon as is practical after the woman has been transferred.

All agreed in-utero transfers should follow local network guidelines.

Indications for transfer

- Requirement for enhanced care for mother, fetus or neonate
- Neonatal unit closed
- Lack of availability of neonatal cot of the appropriate level. The likelihood of the infant needing such a cot needs to be assessed from the available information, e.g. gestation, IUGR, etc.
- Neonatal team request - staffing / workload ratio
- Delivery suite capacity - staffing/workload ratio

Contraindications for transfer

- Obstetric or neonatal staff unable to accept transfer
- Mother refuses transfer
- Significant risk of delivery occurring during transfer
- Known fetal compromise requiring immediate delivery

- Unstable maternal condition likely to require medical intervention during transfer (e.g. active antepartum haemorrhage, uncontrolled hypertension)
- Any other unstable maternal condition

Maternal consent

Maternal agreement needs to be obtained prior to transfer and this should be documented appropriately. This will usually require joint counselling by obstetric and neonatal staff. Counselling should be supplemented with written information whenever possible. It is important to explain that the baby or babies may be transferred back to their home hospital or a hospital nearer to home, at a later stage.

Feasibility of in-utero transfer

- How much time is available before either anticipated delivery or an intervention (not available locally) is required?
- What is the travel time (including transfer etc) to the nearest available appropriately staffed and resourced DU/NICU facility?

Determining the likely timing of delivery

Factors to consider when determining the time of likely delivery in the case of spontaneous onset of pre-term labour in an otherwise uncomplicated pregnancy *might* include:

PRETERM LABOUR

- Fewer than 50% of women presenting with suspected preterm labour will deliver during the current episode.
- Near patient testing for cervical fibronectin appears to be an efficient short-term marker of preterm delivery, particularly in women with symptoms of preterm labour.
 - Meta-analysis suggests that fibronectin has a sensitivity of 77% and a specificity of 87% in predicting delivery within 7 days in symptomatic women.
- Cervical length: cervical length is best measured by vaginal ultrasound.
 - 50% of women with a cervical length of ≤ 15 mm deliver within 7 days.
 - 1% of women with a cervical length of 16 mm or more deliver within 7 days despite symptoms of preterm delivery.
- Cervical length ≤ 15 mm, positive fibronectin and history of preterm delivery are independent predictors of preterm delivery and may detect different populations of women.
- A pragmatic approach might be to consider transfer in women with symptoms of preterm labour and one or more of the following: cervical length < 15 mm, positive fibronectin, history of preterm delivery or PPRM.

PRELABOUR PRETERM RUPTURE OF MEMBRANES (PPROM)

- The median latency between rupture of membranes at 25-31 weeks' gestation and delivery is 10 days and 30% of women will not have delivered by 20 days. Transfer following PPROM should be considered if there is evidence of uterine activity or clinical chorioamnionitis (1 or more of following signs: maternal pyrexia, maternal or fetal tachycardia, uterine tenderness, offensive liquor, leucocytosis).
- Uterine contractions following PPROM are associated with a shorter interval to delivery than with intact membranes.

Management prior to IUT

- The referring unit is responsible for safe, efficient and rapid transfer.
- Cervical assessment should be performed immediately prior to transfer if woman in labour (digitally or using translabial / transvaginal ultrasound).

Management during IUT

- Tocolysis – can be used to delay delivery to ensure safe transfer. It is not required unless there is clinical evidence of uterine activity. If used the efficacy of tocolysis must be assessed before transfer i.e. evidence of a complete cessation of uterine activity for at least 1 hour and no cervical change over this time.
- If delivery appears imminent during transfer the ambulance will take the woman to the nearest hospital with maternity facilities.

Staffing needs for IUT

- Midwife – the woman being transferred should be accompanied by an experienced midwife.
- No paediatric presence is indicated, if delivery that likely, inappropriate to transfer.

Audit

IUT should be the subject of close audit. The following items should be considered where possible:

- Delivery during transfer
- Delivery within 30 minutes of arrival at the destination delivery unit
- Maternal mortality or morbidity on route (morbidity would include hypertensive crisis, eclampsia, haemorrhage and/or requirement for resuscitation)
- Fetal mortality en route
- Numbers of transfers occurring outside of the network
- The outcome following transfer - the timing of delivery, hospital where eventually delivered, neonatal outcome, maternal outcome
- Maternal and neonatal outcomes where a requested IUT did not take place

Maternal refusal to be transferred

- If the mother declines transfer this she can not be transferred against her wishes
- Timely and compassionate communication undertaken by senior staff will help reduce the likelihood of maternal refusal of an acute in-utero transfer where it is considered the most appropriate course of action.
- The mother/parents need to understand that, in the event of an IUT being declined, the baby will be assessed after birth and if still indicated, ex-utero transfer may need to be arranged if this is in the baby's best interest.
- Where an IUT has been refused by the mother there needs to be clear documentation that the risks and benefits both to her and subsequently to her baby have been explained and understood.

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