**Burton Hospitals**
**NHS Foundation Trust**

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| Consultant Paediatric Lead for Neonatal Unit | All Paediatric Medical Staff<br>All Obstetric Medical Staff<br>All Midwives | Neonatal Nurses |
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| **Approved by:**<br><br>**Clinical Director for Women and Children's Services** |  <br>**……**<br>**Clinical Director**<br><br>**Date: 7th April 2017** | |

**Burton Hospitals NHS Foundation Trust**
**Directorate of Women and Children's Services**
**Department of Paediatrics**

# Framework for Practice Relating to the Birth of Extremely Immature Babies (22-26 Weeks Gestation)

## 1.0 Communication before Delivery

Good communication with parents is of paramount importance.

The most experienced clinicians available at the time (preferably Consultant Obstetrician and Consultant Paediatrician with an experienced Midwife), should agree a provisional management plan.

Management plans should be clearly recorded in the notes.

When appropriate, parents should be encouraged to seek support from family members and religious advisers.

## 2.0 Gestational Assessment and Management Recommendations

Early ultrasound (<18 weeks), when done by an experienced Ultrasonographer, is usually reliable.

Caesarean section is rarely appropriate <25 weeks gestation, unless for maternal indications, but in some cases a second opinion may be helpful to the parent.

Even if Caesarean section is not planned, monitoring of the fetal heart may help the Paediatrician decide whether resuscitation or provisional intensive care is appropriate. If the FH is monitored it should be done sensitively (e.g without audible noise), and with the agreement of the parents.

The outcome for babies <24 weeks gestation is extremely poor. Although postnatal transfer to a tertiary unit may not be appropriate, discussion with senior clinicians at a tertiary centre may be helpful in deciding management.

When postnatal transfer is considered inappropriate, supportive care must be provided for the family.

## 3.0 Neonatal Resuscitation

### Initial Resuscitation

If gestation certain and FH heard during labour :

a) $\geq$ 23 weeks gestation:

Experienced Paediatrician and another clinical professional (Neonatal Nurse and SHO) to attend birth in order to assess whether active resuscitation is appropriate depending on the condition of the baby at birth.

b) Babies $\geq$ 24 weeks should undergo active resuscitation but ECM (External Cardiac Massage) and Adrenaline have not been shown to improve survival in LBW babies and is rarely appropriate < 25 weeks gestation.

c) $\leq$ 23 weeks gestation:
Paediatrician does not need to attend delivery, unless previously agreed between Consultant Obstetrician and Consultant Paediatrician. At the present state of knowledge, resuscitation at this gestation is experimental and it is reasonable not to attempt to resuscitate.

If gestation uncertain and FH audible during labour :

Paediatrician to attend all births thought to be > 22 weeks to assess whether active resuscitation is appropriate depending on the condition of the baby.

Factors that may be taken into consideration include:

Evidence of perinatal asphyxia
Advanced sepsis
Extensive bruising
Low or absent heart rate at the time of delivery

A decision may be made to offer minimal support (e.g warmth and facial oxygen) and in the absence of any response, to withdraw support.

**Provisional Intensive Care**

The response of the baby to active resuscitation is critical in deciding whether to institute "provisional" intensive care.

If the heart rate picks up rapidly and the colour of the baby improves, it is appropriate to transfer to NICU for assessment. Further management should be decided by experienced clinicians and will be dependent on the response of the baby to treatment.

## 4.0 Ethical Consideration

When agreement between parents and clinical staff cannot be reached over management of the baby after birth, provisional intensive care should be offered, pending further assessment and discussion.

When intensive care is withheld or withdrawn, the use of opiates to reduce discomfort may be entirely appropriate.

Parents of infants who die should be offered bereavement follow up counselling, including advice about postmortem examination and the prognosis for future pregnancies.

## 5.0 Audit Criteria

- Documentation of senior paediatric paediatric consultation with parents before delivery (if possible)
- Number of in-utero/ex-utero transfers
- Caesarean section between 22-26 weeks gestation
- Withholding/withdrawing of care
- Resuscitation at birth

## 6.0 References

The EPICure Study

Perinatal management at the lower limit of viability. J M Rennie Arch Dis Child Fetal Neonatal Ed 1996 May 74:3 F214-8

Changing prognosis for babies less than 28 weeks gestation in the north of England between 1983 and 1994. Northern Neonatal Network. Tin W, Wariyar U, Hey E BMJ 1997 Jan 11;314 (7074): 107-11

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Withholding or Withdrawing Life Saving Treatment in Children - A Framework for Practice. RCPCH September 1997

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# Management of Threatened Birth at Extremely Low Gestational Age

ESTABLISHED PRETERM LABOUR

CERTAIN GESTATIONAL AGE

NO

PAEDIATRICIANS PRESENT AT DELIVERY

ASSUME VIABLE INFANT - ASSESS AT DELIVERY AND RESUSCITATE IF APPROPRIATE FOR CONDITION

YES

| GESTATION | IN-UTERO TRANSFER | CAESAREAN SECTION | PAED CARE |
|---|---|---|---|
| <22 WKS | NOT INDICATED | MATERNAL INDICATIONS ONLY* | COMPASSIONATE CARE ONLY FOR INFANT** |
| 22 WKS | MAY BE INDICATED FOR OBS | MATERNAL INDICATIONS ONLY* | COMPASSIONATE CARE ONLY INFANT** |
| 23-24 WKS | YES – IF MOTHER'S CONDITION STABLE | RARELY INDICATED* | RESUSCITATION DEPENDANT ON INFANTS AT DELIVERY* |
| 25-26 WKS | YES – IF MOTHER'S CONDITION STABLE | ACCEPTED MODE OF DELIVERY WITH FETAL COMPROMISE | FULL RESUS & SUPPORTIVE CARE |

* Caesarean section offers no benefit to the fetus <25 weeks gestation and should be performed only when indicated for the health of the mother

** Infants at this gestational age cannot be expected to survive, however the Paediatrician may decide to offer active treatment for infants whose gestational age may have been underestimated

*** There are wide variations in prognosis and outcome for infants born at this gestation. The management of an infant delivered at this gestation should be consistent with parents' wishes. For infants without fatal congenital abnormalities, the decision to resuscitate at birth should depend on the infant's condition. Objective criteria include condition at birth, lack of bruising and presence of spontaneous respiratory efforts.

# FACTORS TO BE TAKEN INTO ACCOUNT WHEN DETERMINING MANAGEMENT

## ANTENATAL FACTORS INFLUENCING FETAL OUTCOME:

Gestational age
Steroid administration
Predicted fetal weight

Presence and severity of pathology
- IUGR
- Hypoxia
- Sepsis

Fetal anomaly

## PARENTAL FACTORS:

Cultural
Religious
Medical

Past obstetric history
- Previous pregnancy loss
- Sub-fertility

## PARENTAL EXPECTATIONS:

Understanding of process
- In-utero transfers
- Postnatal assessment
- Paediatric involvement/interventions

Outcome
- Survival
- Morbidity

## CONDITION OF INFANT AT DELIVERY:

Apparent maturity
Birthweight
Evidence of asphyxia
Heart rate and active level
Respiratory effort and evidence of sustained response to resuscitation

**APPENDIX 3**

## SURVIVAL FIGURES FOR NEONATAL PERIOD (CEMACH 2005)

| | |
|---|---|
| 24 weeks | 58% |
| 25 weeks | 77% |
| 27-28 weeks | 92% |