

## **Fetuses and Newborn Infants at the Threshold of Viability A Framework for Practice**

### **BACKGROUND**

1. In the past newborn infants of less than 28 completed weeks' gestation (birthweight approx. <1000g.) rarely survived and were termed 'preivable'. With the development of neonatal intensive care, survival has become possible after a gestation as short as 22 weeks. This led WHO in 1993 to define the perinatal period as commencing at 22 completed weeks of gestation (154 days; birthweight approx. 500g.) Infants born 22 - < 28 weeks gestation (approx. equivalent to 500-1000g.) have been termed as having "threshold viability", though in developed countries this term is more often used in reference to infants of < 26 weeks.
2. The increasing potential risk of residual disability or early death associated with decreasing gestational age (especially < 26 weeks) raises serious ethical dilemmas in respect to appropriate management. These include whether elective delivery for fetal indication is appropriate or whether intensive care should be provided following delivery, or, alternatively, whether comfort care is more appropriate (warmth, offer of oral nourishment and human contact).
3. The perinatal management of the threshold-viability fetus and infant is a multi-disciplinary matter requiring close collaboration between obstetricians, paediatricians, midwives, nursing staff and other supporting professionals. Decisions often have to be made at very short notice. Therefore, forward planning and prior agreement between members of the perinatal team are essential.

### **RECOMMENDATIONS FOR MANAGEMENT**

4. Decisions on management should be based on what is perceived by the parents and their medical advisors to be in the child's best interests, uninfluenced by the child's gender or by religious, eugenic, demographic or financial factors.
5. Medical staff have a responsibility to keep parents informed as to the likely clinical outcome resulting from the decisions in which the parents need to participate. Counselling must be honest and accurate. Parents may have unrealistic expectations not only as to what is medically possible but also as to future prospects for their infant

whatever treatment is proposed.

### **Before Delivery**

6. As soon as the birth of a threshold viability infant is anticipated, the senior neonatologist who will be responsible for the care of the baby after birth, should be informed by the obstetric team so that, whenever possible, he/she may introduce him/herself to the parents and counsel them prior to the delivery. An advance visit to the intensive care unit to meet the staff is usually helpful.
7. In deciding whether to electively deliver a threshold-viability fetus, the obstetrician and perinatal team need to consider a number of factors relating to the proposed place of delivery, the views of the parents, the status of both the mother and her fetus, and the probable outcome.
8. In-utero transfer policies should be agreed in advance between receiving and sending maternity units and should be regularly updated. Women should be counselled to ensure that their expectations following transfer are appropriate and realistic.
9. Perinatal mortality, morbidity and future outcome relate closely to gestational age at birth. There needs to be an agreed policy for the antenatal estimation of the expected date of delivery. This is usually based on early ultrasound measurements and the menstrual history. Physical examination of the infant after birth may lead to a revision of the original estimate. This needs to be explained in advance to parents who otherwise may be confused or feel that an error has been made.
10. The perinatal team need to be aware of up-to-date national statistics on infant mortality and morbidity outcome according to gestational age, as well as the results of local audit. This should include the incidence and severity of disability amongst survivors at the age of 2 years or more. Following delivery, more accurate on-going advice concerning the individual child's prognosis will become available with the passage of time as the result of clinical observation and investigation.
11. Because extremely premature births may take place rapidly when no senior members of the team are available, advance liaison should take place whenever possible between the consultant obstetrician, consultant paediatrician and senior midwife to ensure that there is prospective understanding on the management and on who will try to be present at the delivery.
12. There is a need to balance maternal well-being against the likely neonatal outcome. Caesarean section in the baby's interest can rarely be justified at the present time as a means of delivery prior to 25 weeks' gestation because of the poor prognosis for the baby. If parents insist then a second senior obstetric opinion is advisable.
13. Following counselling on the likely prognosis, some parents may wish to give advance authorisation for the non-resuscitation and non-provision of intensive care for infants at the extreme margin of viability. While appreciating their wishes, such authorisation cannot be considered binding on the healthcare team. For example, the newborn infant

maybe found to be more mature and vigorous than expected.

14. Sometimes continuous monitoring of the fetal heart during labour may assist in perinatal management. On such occasions when the fetus is at the threshold of viability and may not survive, monitoring should be only undertaken after sensitive explanation to the mother. It should be silent and unobtrusive. Intermittent auscultation provides an alternative method.

### **At and After Delivery**

15. Because of the difficulty, complexity and seriousness of management decisions concerning the appropriateness of resuscitation and the use of intensive care, the birth of a threshold-viability infant should be regarded as a major emergency requiring the presence of very experienced members of the obstetric and paediatric teams in the delivery room.
16. It may be appropriate to institute intensive care to threshold-viability infants at birth until the clinical progress of the infant and further consultation with the parents has clarified whether it is better to continue or withdraw this form of medical care.
17. The importance of the development of a close relationship between the senior member of the neonatal team and the parents cannot be overstated. Parents will need to be repeatedly counselled on the clinical status and prognosis of their infant.
18. The doctor counselling parents on the withholding or withdrawal of life support should be senior and experienced. When appropriate the doctor may wish to consult colleagues or, in exceptional circumstances, an ethics committee or the Courts. The doctor should discuss the problem and management with other members of the healthcare team, including the nursing staff.
19. The doctor counselling parents should be careful not to impose his or her own cultural and religious convictions on those whose beliefs may be different, bearing in mind the requirements of the law. When a doctor's beliefs prevents the disclosure of all possible management options open to the parents, the doctor has a duty to refer them to a colleague who is able to do so.
20. Frequently an important part of counselling parents is to try as sensitively as possible to gain insight into their wishes and concerns, in order to spare them avoidable stress and feelings of guilt, rather than trying to seek an outright decision.
21. Parents facing difficult decisions should be encouraged to seek advice from others such as family members or religious advisors. They should be offered the opportunity of seeking additional professional advice. They should always be given the time to speak together in private before reaching a decision.
22. When the parents do not agree with each other, or when they do not accept their doctor's advice on whether or not to withhold or withdraw care, treatment should be pursued until a change in the baby's status or further counselling and discussion clarifies the situation. Only as a last resort and in exceptional circumstances after all

other options have been exhausted, should the problem be referred to the Courts.

23. When a decision has been taken to electively deliver a threshold-viability fetus or to withhold or withdraw neonatal life-sustaining care, all actions taken and the reasons for them, as well as the clinical course of the child and the views of the parents, should be carefully documented by the medical team.
24. Infants from whom life-sustaining support is withdrawn or withheld should continue to be kept warm, offered oral nourishment, and treated with dignity and love (comfort care). Their parents should be encouraged to be with their child as much as possible. They should be given every support during this distressing time.

### **Should Death Occur**

25. After death, especially following the withholding or withdrawal of medical care, the medical team (preferably the most senior paediatrician available) has a responsibility to counsel the parents and explain the desirability for a necropsy examination. Useful information may also be obtained from procedures such as X-rays, MRI and chromosomal analysis. Parents will require further counselling and support from both obstetric and paediatric teams including advice on the results of the necropsy and the outlook for future pregnancies.

### **Follow-up**

26. Threshold viability infants should be followed-up carefully for a minimum of two years (preferably five years) in order to detect disabilities and also to enable the audit of outcome to be completed (see section 9).
27. Extremely preterm infants may suffer from a number of problems and disabilities requiring management from a variety of medical disciplines over a long period. A full summary of perinatal and post-natal events should be prepared and made available to all the healthcare teams involved. A copy should also be given to the parents who of course play a major role in co-ordinating and providing care.

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on behalf of the BAPM Executive Committee