Review of the new BAPM framework for practice (2019): Perinatal management of extreme preterm birth before 27 weeks of gestation

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BACKGROUND

Advances in perinatal care have resulted in increased survival for extremely preterm babies. Recent data suggest that outcomes for babies actively managed at 22 weeks of gestation in the UK may now be similar to babies born at 23 weeks of gestation.[1]

PREVIOUS GUIDELINE

The previous British Association of Perinatal Medicine (BAPM) guideline, 'Framework for Clinical Practice for the Management of Babies born Extremely Premature at less than 26 weeks of gestation,' was published in 2008.[2] It was written in response to the 2006 report from the Nuffield Council on Bioethics, 'Critical care decisions in fetal and neonatal medicine: ethical issues'.[3]

Both documents were produced using data from the EPICure study in 1995 and some preliminary data from EPICure 2.

They both used gestation alone to determine guidelines for the management of extremely preterm babies at birth.

INFORMATION ABOUT THE NEW FRAMEWORK

'Perinatal Management of Extreme Preterm Birth before 27 weeks of gestation – A Framework for Practice' was published in October 2019 by BAPM.[4]

It is essential reading for all paediatricians, neonatologists, obstetricians and other health professionals involved in the care of mothers and babies around the time of extreme preterm birth.

The updated framework is designed to help with perinatal decision-making around extremely premature birth from 22^{+0} to 26^{+6} weeks of gestation.

It describes prognosis according to risk stratification with clear guidance for perinatal management.

Involving parents throughout the decision-making process is emphasised throughout, as is, optimising outcomes for babies who receive active (survival-focused) management. It also details offering excellent palliative (comfort-focused) care to babies where active management is considered not to be in the baby's best interest.

The appendix is extensive and includes an infographic explaining outcomes at different gestations, for example, scenarios and a review of the outcome data.

The maternity management, including mode of delivery, place of birth and provision of antenatal steroids and magnesium sulfate, is covered in a separate section of the framework (box 1).

KEY ISSUES THE UPDATED FRAMEWORK ADDRESSES

The updated framework uses a risk-based approach to aid decision-making. The risk is of an adverse outcome occurring defined as 'either dying or surviving with severe impairment if active care is instigated'.

The framework suggests three steps to inform decision-making:

Assessment of risk if delivery occurs

The categories of risk are:

- Extremely high risk: >90% chance of dying or surviving with severe impairment.

Box 1 Full link to the framework

Link to the full framework: https://www.bapm.org/resources/80-perinatal-management-of-extreme-preterm-birth-before-27-weeks-of-gestation-2019

Table 1 Gestation-based risk factors (adapted from BAPM framework 2019)

	Extremely high risk	High risk		Moderate risk	
Gestational age (weeks)	22	23	24	25	26

BAPM, British Association of Perinatal Medicine.

- High risk: 50%–90% chance of dying or surviving with severe impairment.
- Moderate risk: <50% chance of dying or surviving with severe impairment.

The risk category is determined using:

- The gestational age in weeks (table 1) **AND adjusted with**
- The presence or absence of modifiable and non-modifiable risk factors. These either increase or decrease the gestational age risk.

See table 2 for examples of non-modifiable risks (fetal factors, clinical conditions).

See table 3 for examples of modifiable risks (therapeutic strategies, clinical setting).

With risk determined, the framework then suggests care to be provided after delivery:

- Extremely high risk—palliative (comfort-focused) care, life-sustaining treatment should not be offered. A paediatrician does not need to attend the birth, although individual families may find this helpful.
- High risk—active or palliative care. Following careful counselling of parents by a senior neonatologist, a joint decision is made about which focus for care should commence after birth. Parental wishes are paramount to the decision. Ideally, the same senior neonatologist should attend the birth.
- Moderate risk—active (survival-focused) care should be commenced with a senior neonatologist attending the birth.

Counselling parents and their involvement in decision-making

- Involving parents in the discussions around management at birth is strongly emphasised.
- Senior obstetric, neonatal and midwifery staff should be involved in counselling and planning.
- The risk category should be discussed with the parents in a clear and empathetic way.

Table 2 Non-modifiable risk factors (adapted from BAPM framework 2019)

Increases GA risk	Decreases GA risk
Born at beginning of GA week	Born at the end of GA week
Growth restricted	Normal estimated fetal weight
Male	Female
Multiple	Singleton
PROM before 24 weeks	
Chorioamnionitis	

BAPM, British Association of Perinatal Medicine; GA, gestational age; PROM, prolonged rupture of membranes.

Table 3 Modifiable risk factors (adapted from BAPM framework 2019)

Increases GA risk		Decreases GA risk
No steroids/$MgSO_4$	Incomplete steroid course	Complete steroid course/ $MgSO_4$
Born in hospital without an NICU hospital		Born in hospital with NICU

GA, gestational age; $MgSO_4$, magnesium sulfate; NICU, neonatal intensive care unit.

- The team should explain to parents that although commencing active treatment may be appropriate at delivery, it may not be appropriate to continue either in the delivery room or later in the neonatal intensive care unit (NICU).

Agreeing and communicating a management plan

- The plan needs to be clearly documented and communicated with the maternity team.
- For active management, optimisation needs to occur to ensure the best possible outcome.
- For palliative management, no unnecessary interventions should be carried out.

Optimisation

The framework highlights the importance of optimisation of the obstetric management if active (survival focused) neonatal management is planned. These measures include: administering antenatal steroids, antenatal transfer to a tertiary obstetric centre colocated with a NICU, administering magnesium sulfate and deferring cord clamping (ideally for 60 seconds).

HOW SHOULD THIS FRAMEWORK CHANGE MY PRACTICE?

- For any likely deliveries from 22^{+0} weeks' gestation, assess and determine the risk category as above, discuss and communicate with the maternity team and the parents.
- Regularly reassess the risk as the gestational age advances and review/reconsider modifiable risk factors—adjust the management plan accordingly.
- If palliative care planned, be available at the delivery to support the parents and assist the maternity team to provide excellent palliative care.

ACTIONS THAT CAN MAKE A DIFFERENCE TO PATIENT OUTCOMES AND PARENTAL EXPERIENCE

- Transfer to a hospital with a NICU, and ensure antenatal steroids and magnesium sulfate have been given. Ensure deferred cord clamping occurs for at least 60 s (unless contraindicated).
- Thorough documentation of all discussions with parents as repeatedly discussing the same things can be upsetting and is unnecessary.
- Being kind, clear, concise and understanding when discussing and making a plan with parents.
- When discussing palliative care with parents, explain that the baby may not die immediately and help parents to use the time to create positive memories—for example,

offer to take a family photo. Be confident discussing with parents the processes involved after the baby has died including autopsy and placental histopathology.
- If you are planning for active management, discuss colostrum expression with parents at every available opportunity. The baby should be given the first colostrum as mouthcare as soon as it is available.

Take home messages

- Use the framework before delivery to assess the risk for the baby to determine appropriate management—active or palliative.
- Include parents as much as possible in decision-making.
- Ensure optimisation when active management is considered in the best interests of the baby.
- Be open to supporting parents and staff when palliative care is considered in the best interests of the baby.
- Document all management plans clearly.

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