

## Preterm Birth Guidance

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The latest approved version of this document is online.  
If the review date has passed please contact the Author for advice.

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## Version Control

Version	Summary of Changes/Amendments	Issue Date
1	Initial Issue	13/08/2024

## Circulated to the following for Consultation

Date	Role / Designation
02/01/24	Head of Midwifery
02/01/24	Consultant Midwife
14/05/24	Community Midwives and Team Lead Midwives
14/05/24	Governance Lead for Maternity
14/05/24	Interim Assistant Heads of Midwifery
14/05/24	Supervisor of Midwives
14/05/24	Safeguarding Lead for Maternity
14/05/24	Safeguarding Hub for PTHB
14/05/24	Welsh Ambulance Service
14/05/24	Paediatric Physiotherapist (Powys)
29/05/24	Consultant Neonatologists – Hywel Dda & Swansea Bay

## Groups Approved at

Date	Group
01/07/24	Maternity guidelines Group
09/07/24	Midwifery Management Meeting
15/07/24	Women and Children's policies and procedures group
17/06/24	Women and Children's policies and procedures sub-group

## **Evidence Base**

All Wales Maternity and Neonatal Guidelines (2023)  
Antenatal Optimisation for Preterm Infants less than 34 weeks: A  
Quality Improvement Toolkit (2020)  
BAPM Framework for Practice (2019)  
NICE Guideline NG25: Preterm Labour and Birth (2015 updated 2019)  
Perinatal Management of Pregnant Women at the Threshold of Infant  
Viability (The Obstetric Perspective), RCOG Scientific Impact Paper No.  
41 (2014)  
PERIPrem Cymru (2023)  
BAPM Pre-hospital management of the baby born at extreme preterm  
gestation (2022)  
NICE Postnatal Care NG (2021)  
UK Resuscitation Council Guideline (2021)

## Impact Assessments

Equality Impact Assessment Summary					
	No impact	Adverse	Differential	Positive	Statement
					The positive impact would be to provide a clear pathway of care for women birthing preterm in Powys to ensure safety, efficiency and optimize the best outcome possible for mother and baby.
<b>Age</b>	X				
<b>Disability</b>	X				
<b>Gender reassignment</b>	X				
<b>Pregnancy and maternity</b>				X	
<b>Race</b>	X				
<b>Religion/ Belief</b>	X				
<b>Sex</b>	X				
<b>Sexual Orientation</b>	X				
<b>Marriage and civil partnership</b>	X				
<b>Welsh Language</b>	X				
<b>Human Rights</b>	X				
Risk Assessment Summary					
<b>Have you identified any risks arising from the implementation of this policy / procedure / written control document?</b> No risks have been identified.					
<b>Have you identified any Information Governance issues arising from the implementation of this policy / procedure / written control document?</b> No information governance issues have been identified.					
<b>Have you identified any training and / or resource implications as a result of implementing this?</b> No training or resource implications have been identified.					

## **1 Introduction**

Preterm labour or birth is defined as the onset of established labour or birth before 37 weeks of pregnancy.

In the UK, 8% of all births will occur before 37 completed weeks of gestation. However, in Powys we offer a Midwifery Continuity of Care model which is known to reduce preterm birth rates by 24%. Our in county preterm birth rate in 2022 was 3 %.

70% of preterm births are spontaneous following the onset of spontaneous contractions or preterm prelabour rupture of membranes (PPROM). The remainder of women give birth preterm electively when this is thought to be in fetal or maternal best interest. Preterm birth is the biggest cause of neonatal morbidity and mortality in the UK.

Most women who present with threatened preterm labour will go on to birth at term, even in the absence of intervention. It is essential to recognise those women who are at the highest risk to ensure timely referral so that care can be managed, and any interventions can be managed safely and effectively.

Babies who survive preterm birth have increased rates of disability. The major long-term consequence of prematurity includes poorer neurodevelopmental and educational outcomes.

## **2 Objective**

This guideline amalgamates current guidance in relation to unplanned out of hospital preterm labour and birth into one guideline for use in Powys. This includes the identification and management of suspected pre-term labour, including management of suspected prelabour preterm rupture of membranes.

1. Identify women at risk of preterm birth
2. Promote changes to reduce the risk of preterm birth,
3. Appropriate referral to ensure timely care for women at risk
4. The care and transfer of the woman and baby safely in the event of preterm labour or birth in community
5. Provision of postnatal care to women who have experienced preterm birth

### 3 Definitions

- **PTHB** – Powys Teaching Health Board
- **DGH** – District General Hospital
- **BAPM** – British Association of Perinatal Medicine
- **NICE** – National Institute for Health and Care Excellence
- **RCOG** – Royal College of Obstetrics and Gynaecology
- **PPROM** – Preterm Prelabour Spontaneous Rupture of Membranes

### 4 Responsibilities

#### 4.1 Head of Midwifery and Sexual Health Services

The Head of Midwifery and Sexual Health Services must:

- Ensure all staff read and understand this procedure
- Arrange regular review to monitor compliance with this procedure

#### 4.2 Assistant Head of Midwifery and Sexual Health Services

The Assistant Head of Midwifery and Sexual Health Services has responsibility for:

- Ensuring dissemination of this document to all relevant staff
- Liaising with District General Hospitals (DGH) to feedback where care has fallen outside of this guideline

#### 4.3 Band 7 operational team lead (OTL)

The OTL has responsibility for:

- Ensuring dissemination of this document to all relevant staff
- Ensure competence in carrying out this procedure is reviewed as part of the appraisal process

#### 4.4 Women and Children's Risk and Governance Lead

The Women and Children's Risk and Governance Lead has responsibility for:

- Monitoring review of incidents in relation to content of this document

#### 4.5 Community Midwives

All midwives working in the maternity services have responsibility for:

- Reading and being familiar with contents of this document
- Referring neonates appropriately for additional care where required
- Working to the requirements of their role within the scope of this guideline
- To follow up women that have had a preterm birth within a DGH or PTHB
- To complete comprehensive and contemporaneous record keeping

## 5 Preventing Pre-term Birth

All women should be assessed at booking for risk factors for preterm birth. This assessment should include modification of risk factors if appropriate. Women identified as being at increased risk of preterm birth should be made aware of the signs and symptoms of preterm labour and advised to contact early if these occur.

Associated modifiable risk factors:

**1. Smoking cessation:** Smoking doubles the risk of preterm birth and therefore all women should be asked about smoking, and cessation advice and/or referral should be provided. Women who have experienced a previous preterm birth, who stopped smoking early in the pregnancy, modify their risk back to that of a non-smoker. If smoking cessation is delayed until the third trimester this modifiable benefit is lost.

**2. Maternal age:** Women <18 years of age have an increased risk of preterm birth. Referral to support and advice wrap around teams should be offered to provide adequate support and advice throughout the pregnancy and may help prevent preterm birth.

**3. Domestic violence:** Women experiencing domestic violence and/or other social pressure should be directly counselled and referred for specific support through local pathways.

**4. Aspirin:** NICE recommends Aspirin to reduce the risk of pregnancy complications related to placental dysfunction, particularly preeclampsia. Thus, it is important to take a full history from pregnant women who have had a previous baby with FGR and/or a preterm birth to determine whether placental dysfunction was a contributory factor and refer to obstetric led care for consideration of Aspirin.

Specialised antenatal care for women at high risk of preterm birth reduces the number of preterm births, and specialist clinical teams are recommended to deliver this care.

### **Women who may have an increased chance of spontaneous preterm birth:**

- Previous preterm birth or spontaneous mid-trimester loss (16 to 34 weeks' gestation).
- Previous preterm pre-labour rupture of membranes <34/40.
- Previous use of cervical cerclage or progesterone to prevent preterm birth.
- Cervical length <2.5cm

- Black ethnicity
- Vaginal bleeding during pregnancy
- Multifetal pregnancy
- Vaginal/urinary tract infections during pregnancy
- Low BMI
- Known uterine variant (i.e., unicornuate, bicornuate uterus or uterine septum).
- Intrauterine adhesions (Ashermann's syndrome).
- History of trachelectomy (for cervical cancer).
- Previous birth by caesarean section at full dilatation
- History of significant cervical excisional event i.e., LLETZ where >15mm depth removed, or >1 LLETZ procedure carried out or cone biopsy (knife or laser, typically carried out under general anaesthetic).

However, approximately 50% of women who birth preterm do not have identifiable risk factors.

**Please refer to PERIPrem pathways in relation to perinatal optimisation (Appendices A & B)**



### **5.1 Preterm Prelabour Spontaneous Rupture of Membranes (PPROM)**

Preterm prelabour rupture of membranes (PPROM) complicates up to 3% of pregnancies and is associated with 30–40% of preterm births. PPRM can result in significant neonatal morbidity and mortality, primarily from prematurity, sepsis, cord prolapse and pulmonary hypoplasia. In addition, there are risks associated with chorioamnionitis and placental abruption. The median latency after PPRM is 7 days and tends to shorten as the gestational age at PPRM advances.

Assessment for suspected PPRM <37 weeks gestation will be performed in an obstetric unit.

At first contact a detailed history should be taken, including gestation. When taking history and giving advice any risk factors for PPRM should be considered as part of the assessment and include the high-risk factors for preterm birth listed in section 5.

All women reporting concerns of PPRM must be referred for urgent obstetric review at the most appropriate DGH triage/day assessment unit for gestation.

### **Communication**

The DGH to be attended must be informed of the SBAR findings and the arrival of the woman for diagnosis and subsequent management of PPRM.

The designated community midwife and/or community midwifery team must be informed to ensure follow up is undertaken.

As per triage guidance advise women to ring 999 for an ambulance if there is any heavy bleeding and if the situation changes prior to attending the DGH and to contact the community midwives again for advice.

## **5.2 Identification of Preterm Labour**

**All women with suspected preterm labour will be recommended assessment and diagnosis within an obstetric unit.**

At initial contact use professional clinical judgement to advise the woman whether to make her own way to the DGH or to call an ambulance. If an ambulance is advised, where a delay in transfer will not be caused a midwife can be asked to attend and provide support and assistance while waiting. It is expected that the midwife will accompany the woman in the ambulance.

To optimise outcomes the priority is for timely transfer of the mother to an obstetric unit best suited to the mother's health needs as well as the level of neonatal expertise required. Consideration must be made as to the suitability of specialist neonatal services appropriate for the gestational age of the baby, if born.

Establish the gestational age where possible. A detailed history should be taken, including any pre-existing risk factors for preterm labour in both this and any previous pregnancies. Utilise the full clinical picture to inform your management plan. Signs and symptoms of preterm labour include,

- Mild abdominal cramps, often painless
- Diarrhea/nausea and vomiting
- Pelvic or lower abdominal pressure
- Constant low, dull backache
- Change in vaginal discharge, watery, bloody or with mucus
- Ruptured membranes

It is important to consider the possibility of placental abruption especially when associated with backache/loose stools.

Be aware that symptoms of pre-term labour can be mis-diagnosed as urinary tract infections.

Some women present with pre-term labour following assault, there is a need for vigilance for domestic violence.

Women in suspected preterm labour between 22<sup>+0</sup> and 25<sup>+6</sup> pregnant follow the 'Management of Extreme Preterm Labour Integrated Care Pathway' in **Appendix D**.

## **6. Facilitating unexpected preterm birth in the community setting**

### **6.1 All preterm babies**

For guidance on Newborn Life Support refer to the [Resuscitation Council UK Newborn Resuscitation and support of transition of infants at birth](#) (2021).

An out of hospital preterm birth is an emergency situation and a 999 call should be made immediately ensuring a 'red' call categorisation. *Consider the use of EMRTS where this will not significantly delay conveyance and will support management and assist decision-making.*

Communication across all care teams is a priority. Contact the on-call Neonatal Consultant at the nearest tertiary unit as soon as possible for clinical support and management advice.

*Appendix E outlines newborn resuscitation equipment carried by community midwives in Powys.*

### **Hypothermia**

Maintaining normothermia (between 36.5 – 37.5 degrees) in preterm infants significantly improves outcomes and should be considered a priority alongside support for airway and breathing. Creating a warm environment, excluding draughts, staying off the floor, skin to skin, use of transwarmers<sup>©</sup>, neonatal cocoons and plastic bags are ways we can maintain normothermia. Regularly check the baby's temperature. If <36.5 document observations on a NEWTs chart.

Thermoregulation equipment available includes:

Midwives – Hat, towels, plastic bag, temperature probe

WAST – Ready Heat<sup>®</sup> Warming Cocoon & NeoHelp plastic bags

EMRTS - Transwarmers<sup>©</sup>

### **Hypoglycaemia**

Preterm babies are at risk of hypoglycaemia. Offer a breastfeed or expressed breast milk as soon as is practical following birth, and certainly within the 1<sup>st</sup> hour of life where appropriate.

Offer glucose gel as per SOP for Hypoglycaemia in High-Risk Infants in the Community Setting (MAT 083) if infant is >35 weeks and you have a weight.

#### **Dextrose Gel:**

Prepare a dose of 0.5ml/kg of 40% oral glucose gel while awaiting/undergoing transfer, offering breastmilk immediately after administration. Do not delay transfer to facilitate this.

Weight of baby (Kg)	Volume of Oral Gel (ml)
1.5-1.99	1ml
2.0-2.99	1.5ml
3.0-3.99	2ml
4.0-4.99	2.5ml
5.0-5.99	3ml
6.0-6.99	3.5ml

- Prepare resuscitation equipment and area, on a flat surface, off the floor if possible. Create a warm environment where possible. Request ambulance temperature to 25 degrees.
- If airway and breathing support is required provide this on a flat surface. Effective administration of ventilation breaths is extremely difficult with the baby being cuddled or held skin to skin.
- The priority will be immediate, safe transfer to the appropriate setting for obstetric and neonatal care. Contact the on-call Neonatal Consultant at the nearest tertiary unit for clinical support and management advice.

## **6.2 Term and near-term babies at 32 – 37 weeks gestation**

- Dry well immediately after birth
- Cover head and body with warm towels
- If no resuscitation required place infant skin to skin and cover with towels. Monitor to ensure continued normothermia (36.5 – 37.5)
- If >34 weeks gestation and >2000g and requiring airway management consider the use of an iGel Size 1
- Delay cord clamping for at least 60 seconds. Longer may be more beneficial. Aim to offer initial resuscitation interventions with the cord intact.
- Offer all resuscitation on a flat surface and as per UK RC NLS Guidance.
- On arrival of paramedic ambulance prioritise the use of any thermoregulation equipment available.

### **Transfer**

Well newborns > 32 weeks gestation may be dried and placed skin-to-skin to maintain their temperature during transfer as long as the mother is normothermic. Infants should be watched carefully to ensure airway and breathing are not compromised.

## **6.3 Preterm Babies < 32 weeks gestation**

- Do not dry the baby and place immediately into a plastic bag, using a radiant heat source. Where a radiant heater is unavailable, swaddle the baby in the plastic bag with warm towels.
- Protect the baby from any draughts, avoid placing on the floor where possible
- If well and requiring no ongoing support, newborns >30 weeks may be dried and placed skin to skin during transfer
- Delay cord clamping for at least 60 seconds. Longer may be more beneficial. Aim to offer initial resuscitation interventions with the cord intact.
- Offer all resuscitation on a flat surface.

- On arrival of paramedic ambulance prioritise the use of any thermoregulation equipment available.

#### **6.4 'Extreme' prematurity 22+0 – 25+6 weeks gestation**

- **< 22+0 weeks gestation**

Active resuscitation is not recommended, even with signs of life (BAPM, 2022).

- **>22+0 onwards**

Offer active resuscitation.

**Contact the on-call Neonatal Consultant at the nearest tertiary unit as soon as possible for clinical support and management advice.**

The unplanned birth of an extremely preterm baby in an out of hospital setting is a challenging situation. Acknowledging the limitation of skills and equipment available, BAPM have produced a consensus document, supported by the RCM, offering a pragmatic approach to the management of unexpected extreme preterm birth in an out of a hospital setting [Pre-hospital management of the baby born at extreme preterm gestation](#) (BAPM, 2022). See Appendix D.

#### **Survival-focused care.**

It is acknowledged that delivering sustained effective airway and breathing support in the out of hospital setting, and during conveyance to hospital is significantly challenging.

Even in the most experienced hands, the majority of babies born at 22<sup>+0</sup> – 23<sup>+6</sup> weeks' gestation in a maternity unit co-located with a neonatal intensive care unit will not survive to discharge [2].

For the purposes of this document, the term "survival-focused care" means interventions for the baby intended to help to keep the baby alive and warm until more skilled neonatal assessment and ongoing management can be undertaken.

Signs of life may be difficult to determine at extreme preterm birth and so in many cases it will be reasonable to commence simple interventions focused on maintaining body temperature and supporting respiration until more

highly skilled specialist neonatal help is available. If there is doubt about signs of life, commence survival-focused care.

### **Thermal Care:**

Extremely preterm babies cannot generate heat. Heat loss will be exacerbated by evaporation of amniotic fluid from the skin of a wet baby. Thermal insulation (e.g. a blanket) will help to maintain the baby's temperature, but will not warm a cold baby. Hypothermia is associated with poorer prognosis in all babies. Use warmed blankets if possible.

**It should be assumed that the baby will get cold.**

#### **Consensus Statement**

While there is no published evidence of benefit from the use of polythene bags in the absence of a radiant heat source, neither is there any evidence (nor expectation) of harm [8]. A polythene bag in combination with swaddling will help to prevent heat loss in extremely preterm babies born out of hospital. The baby should ideally be placed into the bag immediately after birth, and not dried beforehand. When the baby has already been dried, a polythene bag will be of less benefit, but is not predicted to cause harm and is still recommended.

- Prepare the environment for stabilising the baby on a flat surface off the floor. Identify a clean, ideally well-lit area for the imminent birth, make sure windows and doors are closed to minimise draughts. Put a heater on if available.
- At birth, the baby should be placed feet first into a polythene bag and the edges of the bag brought up to the baby's neck before immediately swaddling in a warm dry towel. Polythene wrap may be substituted for a polythene bag. Do not cover the baby's face.
- Place a hat on the baby; if not available use another head covering (e.g. an adult-sized sock).
- Place the swaddled baby on a heated mattress (if available)
- The baby should not be dried unless there is delay in locating a polythene bag. If no bag is available, dry the baby very gently and wrap in a warm towel.
- Delayed cord clamping is recommended. Unless there is significant maternal haemorrhage and/or the mother requires urgent medical attention, do not clamp the umbilical cord for at least 60 seconds. Use this time to focus on placing the baby into the polythene bag up to the neck, applying a hat and wrapping with a warm towel/blanket.

### **Stabilisation and resuscitation - extreme preterm birth out of hospital**

- Take steps to ensure thermal stability during the period of deferred cord clamping (see above).
- Maintain the head in neutral position and provide jaw support.
- Stimulate the baby gently to breathe.

- Undertake a brief assessment of breathing and heart rate, using a stethoscope. Baby crying vigorously/making good breathing efforts - no respiratory support required. Poor or absent respiratory effort – provide respiratory support. No heart rate and no respiratory effort – baby may not be alive, but still proceed to provide respiratory support
- Respiratory support: use the smallest mask available (Size 00); two-person support is best if this can be achieved. Provide 5 gentle inflation breaths, sustained over 2-3 seconds and then gentle ventilation breaths at approximately 30 breaths per minute in room air. Maintain baby's head in neutral position.
- Where mask ventilation alone is inadequate use the LMA Size 0 iGel (for <34 weeks and < 2000g – no lower gestation limit)
- An adequate heart rate (>100bpm) can be taken as an indicator of effective ventilation. Chest wall rise may be difficult to determine and assessment of this would necessitate unwrapping the baby with risk of heat loss.
- Continue airway/breathing support in air until arrival at destination
- Do not unwrap the baby to examine; auscultation of heart rate over the polythene bag and under the blanket is sufficient.
- In the event of a very slow (< 60 bpm) or undetectable heart rate despite appropriate airway and breathing support, chest compressions are unlikely to be helpful and are not recommended below 24+0 weeks' gestation. It is very likely that the baby will not survive.
- For more mature babies or where gestation is not known and potentially more than 24 completed weeks, NLS guidance should be followed.

### **Transit to definitive care**

Pre-alert the intended receiving unit and discuss with the Consultant Neonatologist/Paediatrician the most appropriate destination unit for the transfer. Utilise WAST Guidance on 'Preterm Birth in a Prehospital Setting' to support transfer planning.

Once initial resuscitation has taken place and if the decision is for continuing support and transfer, move baby and mother to the ambulance.

- Optimise thermal care: Keep baby swaddled and on a heated mattress. Set ambient ambulance temperature and minimize draughts.  
All ambulances carry a radiant heat source.
- Continue uninterrupted mask ventilation and assess heart rate at 2-3 minutes intervals to guide continuing intervention.

- Airway/circulation management will most easily be achieved on a flat surface; effective administration of ventilation breaths is extremely difficult to achieve with the baby being cuddled and/or held in skin to skin contact.
- Where the mother is unstable a second ambulance team will be required.

A heated mattress as well as a food grade (or clinical grade) polythene bag are essential in effectively managing the birth, stabilisation and resuscitation of an extremely preterm baby in the out of hospital setting. Oxygen saturation and ECG monitoring are unlikely to be beneficial unless a pre-hospital critical care team is in attendance and are therefore not recommended.

Use a heated mattress with care – the baby must be wrapped in a towel or blanket in contact with the correct side of the mattress. Direct contact with the mattress will lead to skin damage and potential hyperthermia. Regular monitoring of temperature every 10 minutes.

### **Baby does not appear to respond to resuscitation**

- Stopping resuscitation should be discussed with a Consultant Neonatologist and where there has been no response after 20 minutes and reversible problems have been excluded.

Review:

- Clinical factors e.g. gestation, dysmorphic features
- Effectiveness of resuscitation
- Clinical team views about continuing resuscitation
- Length of time from hospital services

- Otherwise continue with resuscitation until arrival at destination where a decision can be made by the receiving medical team on the appropriateness of continued support.

### **6.5 Comfort-focused (palliative) neonatal care (<22+0 weeks gestation)**

Comfort-focused care should be offered in Powys to babies

- <22+0 weeks gestation
- or those where an advance care directive in place.

Where a joint decision has been agreed with parents that the prognosis is likely to be so poor that survival-focused management of the baby is not appropriate (e.g. where the gestation is less than 22 completed weeks or an

advance care directive is in place) comfort-focused care should be instigated if the baby survives labour and birth.

Inform parents that their baby may show signs of life after birth, including visible heartbeat, gasping and/or movement of limbs. The parents should be given time together with their baby and facilitated to be actively involved in their baby's care. This could include holding the baby, either skin to skin or swaddled and photographs. A family blanket or a "cuddle pocket" may help the parents in holding and comforting their baby with dignity. These are available in WAST. The other parent and/or family members should be facilitated to be with the mother and her baby, recognising that travel in the ambulance will not always be appropriate.

If a midwife is in attendance and the mother stable, the family may prefer to remain at home, otherwise mother and baby should be transported together to maternity care as soon as it is safe to do so.

**All babies born in PTHB <37 weeks need to have a DATIX incident form submitted as soon as possible following the event.**

## 7 PERIPrem Cymru



All women at risk of birth before 34 weeks should be issued a PERIPrem Cymru baby passport and given the opportunity to ask any questions regarding the care bundle.

- Appendix **A** PERIPrem Cymru Perinatal Passport
- Appendix **B** PERIPrem Cymru Baby Passport for parents to understand the pathway for their baby.

### **Expressing of Maternal Breast Milk**

There is a leaflet in Appendix **C** 'Early Maternal breast milk'. This is available in Welsh. The leaflet should be provided to all women in the booking pack and the importance of early maternal breast milk discussed at 16 weeks.

**The PERIPrem Perinatal Passport in Appendix A should be commenced and following transfer provided to the hospital at professional handover.**

## 8 Postnatal Care following Preterm Birth

### 8.1 PTHB Postnatal Follow up

Postnatal care following discharge from a DGH should either be arranged in the DGH when the woman visits her baby in the neonatal unit or with her community midwife dependant on the woman's preference. Women should be seen at least once by her community midwife team.

Women that have unfortunately experienced the loss of a preterm baby should be offered visits in accordance with the NICE postnatal care guidance to monitor maternal well-being and provide the opportunity to talk about her birth experience, and provide information about relevant support.

- SANDS [www.sands.org.uk](http://www.sands.org.uk)
- Tommy's [www.tommys.org](http://www.tommys.org)
- Bliss [www.bliss.org.uk](http://www.bliss.org.uk)
- Saying Goodbye [www.sayinggoodbye.org](http://www.sayinggoodbye.org)
- Petals Email: [counselling@petalcharity.org](mailto:counselling@petalcharity.org)
- Lily Mae Foundation Email: [info@lilymaefoundation.org](mailto:info@lilymaefoundation.org)

### **Birth and death certification and registration**

Where birth takes place before 24 completed weeks' gestation, the baby will be classified as a neonatal death if signs of life have been present at birth or as a late fetal loss if no signs of life were present at delivery.

## **8.2 Postnatal Follow up**

Follow up pathways are imperative for all women who have undergone a preterm birth. All women who have birthed prior to 34 weeks should be offered a postnatal consultation by the local obstetric team, and if repeated or more complex, by a more experienced preterm prevention specialist.

This facilitates debriefing and provides information regarding the birth. It should also lead to a plan of care prior to and during any future pregnancy. Placental histology should be requested for all births <34 weeks gestation.

In addition, psychological support should be arranged where required.

The Powys Paediatric Physiotherapy team will accept referrals for babies born at 32 weeks gestation or less or those babies where there may be concern regarding development/underlying medical diagnosis.

## **9 Monitoring Compliance, Audit & Review**

All preterm births will be reported through DATIX system and be reviewed for compliance with this guidance.

Annual mandatory training in Newborn Life Support.

This document will be reviewed every three years or earlier should audit results or changes to legislation / practice within PTHB indicate otherwise.

## **10 References / Bibliography**

All Wales Maternity and Neonatal Guidelines (2023)

Antenatal Optimisation for Preterm Infants less than 34 weeks: A Quality Improvement Toolkit (2020)

BAPM Framework for Practice (2019)

NICE Guideline NG25: Preterm Labour and Birth (2015, updated 2019)


Perinatal Management of Pregnant Women at the Threshold of Infant Viability (The Obstetric Perspective), RCOG Scientific Impact Paper No. 41 (2014)

PERIPrem Cymru (2023)


BAPM Pre-hospital management of the baby born at extreme preterm gestation (2022)

NICE Postnatal Care (2021)

## Appendix A – Complete for all babies at risk of birth <34 weeks & put in maternal record.



# PERIPrem Cymru Data Passport




This PERIPrem Cymru (Perinatal Excellence to Reduce Injury in Premature Birth Cymru) passport must be completed for all women at risk of birth before 34 weeks' gestation and should accompany each baby on admission to neonatal care.

Have you given parents the 'Our PERIPrem Cymru Passport'? Y  N

<b>Maternal Details</b> Name: DOB: Hosp No: NHS No: Or patient sticker here  Booking Hospital: Hospital of Birth :	<b>Baby Details (one passport per baby)</b> Name : NHS No : Time of birth: __:__:__    Type of birth: Gestation:            /40 Birth weight:            g Apgars: @1    @5    @10 Time of admission to NNU: __:__:__
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### 1. Place of Birth:

Aim:  
Babies should be born in an appropriate centre for their weight and gestation.  
\*Refer to Place of Birth Poster\*




Born in a maternity centre with the appropriate designation of neonatal unit?

Y  N

If not, why was intrauterine transfer not achieved?

### 2. Antenatal Steroids:

Aim: Women giving birth before 34 weeks should receive a full course of steroids no longer than 7 days prior to birth



Full course of antenatal steroids (2 doses 12-24hrs apart)?


Y  N

First dose:	Date: / /	Time: :
Last dose:	Date: / /	Time: :

If a full course of optimally timed steroids was not achieved, why?

### 3. Antenatal Magnesium

Aim:  
Women giving birth before 30 weeks should receive a loading dose and ideally a 4 hour infusion, in the 24 hours prior to birth



Loading dose given? Y  N  N/A

Date: / /	Time: :
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Was a 4-hour infusion given within 24 hours prior to birth?

Y  N  Time maintenance infusion started: :

If Magnesium was not given, why?

#### 4. Antibiotic Prophylaxis



**Aim:**  
Women in established preterm labour and or having caesarean birth with PPRM should receive intrapartum antibiotic prophylaxis to prevent early onset GBS infection

Required? Y  N

First dose: Date: / / Time: :

Given more than 4hrs before birth? Y  N

If no antibiotic prophylaxis given or antibiotic given within 4h, why?

#### 5a. Early Maternal Breast Milk (MBM) (antenatal info)



**Aim:**  
Women at risk of preterm birth should receive information about the importance of breast milk and be supported to express antenatally where appropriate.

Women counselled antenatally re. benefits of early MBM and & frequent expressing, including written information?

Y  N

If not, why?

Expression started:

Date: / /

Time: :

Colostrum obtained:

Date: / /

Time: :

#### 6. Optimal Cord Management (OCM)

**Aim:**  
The cord should be left intact for at least 1 minute after birth.



Was the cord left intact for at least one minute after birth?

Y  N

Time of OCM:

\_\_\_\_\_minutes

\_\_\_\_\_seconds

If no OCM, why?

#### 7. Thermo Regulation

**Aim:**  
Babies should have an admission temperature taken within one hour and this should be between 36.5-37.5C



Admission Temp between 36.5°C to 37.5°C ?

Y  N

Admission Temp: °C

If normothermia was not achieved, why?

### 5b. Early Maternal Breast Milk (MBM)



Aim:

All mothers should be supported to express antenatally and/or within 2 hours of birth.

**All babies should receive early maternal breast milk within 6 hours of birth.**

Mother helped to express within 2h of birth?

Y  N

First expressed postnatally: Date : / / Time: :

**MBM given to baby:** Date : / / Time: :

If MBM not given to baby within first 6h, why?

First mother-baby skin-to-skin: Date : / / Time: :

### 8. Respiratory Management:



Aim:

If invasive ventilation is required, Volume Targeted Ventilation (VTV) should be used to reduce lung injury.

Preterm babies should be stabilised on non-invasive breathing support where possible.

Was a trial of CPAP offered in the delivery room?

Y  N

Did baby require intubation and mechanical ventilation in the first 24 hours?

Y  N

Was VTV/VG ventilation used?

Y  N  N/A

If VTV/VG not used, why?

### 9. Caffeine:



Aim:

Caffeine should be given to babies born <30 weeks and/or <1500g within 24 hours of birth.

Consider giving to babies born <34 weeks if requiring breathing support.

Given within first 24 hours of life

Y  N  N/A

Loading dose given at: Date : / / Time: :

If Caffeine is not given within 24 hours, why?

### 10. Probiotics:



Aim:

*A probiotic should be given to babies born <32 weeks and/or <1500g in the first 24 hours of life.*

Was a probiotic given in the first 24 hours of life?

Y  N  N/A  Date : / / Time: :

If not given, why?

## Appendix B

### PERIPrem Cymru Parent-Held Baby Passport



# Our PERIPrem Cymru Passport



Llywodraeth Cymru  
Welsh Government

PERIPrem Cymru (Perinatal Excellence to Reduce Injury in Premature Birth Cymru) is a package of care to give premature babies born less than 34 weeks in Wales the best chance at birth and protect their brain. Every baby is unique and every baby's entrance into this world is different. Some measures on this list may not be possible.

This is a parent held passport, please talk to your midwife or doctors to explore this.

#### Place of Birth

(babies born early or small sometimes need to be born in a more specialist unit. Speak to your doctor to find out if this is the case for you)



I am at the optimal hospital in case my baby(ies) needs to be born early.

Not Possible In Progress Complete



I am aware that I might have to be moved to another hospital and if this isn't possible then my baby(ies) might need to be moved to another hospital after they're born.

#### Antenatal Steroids

(for all babies born before 34 weeks)



I have been given a full course of steroids to help prepare my baby(ies) for being born early.

Not Possible In Progress Complete



#### Antenatal Magnesium Sulphate

(for all babies born before 30 weeks)



I have been given Magnesium Sulphate to protect my baby(ies) brain.

Not Possible In Progress Complete



#### Early Maternal Breast Milk

(for all babies)



I have been shown how to express breast milk so that it can be given to my baby(ies) within 6 hours of birth. Skin-to-skin with my baby will be possible as soon as it is safe.

Not Possible In Progress Complete





# Our PERIPrem Cymru Passport



## Antibiotics Before Birth

*(for all babies born before 34 weeks where needed)*



I have been given antibiotics to reduce the chance of my baby(ies) developing an infection called Group B Strep, 4 hours before my baby(ies) is born.

Not applicable  Not Possible  Complete

## Optimal Cord Management

*(for all babies)*



After my baby(ies) was born, the team waited at least a minute before clamping the cord, to support my baby to be born safely and receive extra blood from the placenta.

Not Possible  Complete

## Thermo Regulation

*(for all babies)*



My baby(ies) temperature has been kept in the expected range after birth.

Not Possible  Complete

## Respiratory Management

*(for babies born before 34 weeks who need a breathing tube)*



If my baby(ies) has needed a breathing tube, a special ventilator setting has been used to protect their lungs.

Not Possible  Complete

## Caffeine

*(for babies born before 30 weeks or who weigh less than 1500g)*



My baby(ies) has been given caffeine to protect their brain and help their breathing.

Sometimes this is given to babies less than 34 weeks.

Not Possible  Complete

## Probiotics

*(for babies born before 32 weeks or who weigh less than 1500g)*



My baby(ies) has been given a probiotic containing friendly bacteria to help protect their gut.

Not Possible  Complete

Having a baby(ies) born early can be unexpected and overwhelming. Please discuss this passport with your care team. We are here to support you, your baby(ies) and your family.



**'Pob Babi, Bob Tro' 'Every Baby, Every Time'**

This resource has been modified with kind permission from PERIPrem.

## Appendix C



# Early Maternal Breast Milk

Evidence shows that for premature babies, their mother's\* fresh breast milk is the most important and effective nutrition that is available.

Your breast milk has a vital role in protecting your premature baby's gut from necrotising enterocolitis, a serious and sadly, in some cases, life threatening gut condition.

It also helps their brain, immune system, eyes and lungs. For premature babies, breast milk is associated with improved development as the baby grows up (development includes skills like walking, coordination, speech).



### Every drop counts

Each millilitre of their mother's breast milk has a positive influence on outcomes for premature babies.

All babies, no matter how early or unwell, can receive their mother's colostrum (special early breast milk) into their mouths.

Your breast milk is specifically designed for your baby in terms of nutrition, optimum gut health and immunity.

\*The words mother and mothers have been used throughout this leaflet as this is the way that the majority of those who are pregnant and having a baby will identify. For the purposes of this leaflet, this term includes girls. It also includes people whose gender identity does not correspond with their birth sex or who may have a non-binary identity. (nmc.org.uk: [standards-of-proficiency-for-midwives.pdf](https://www.nmc.org.uk/standards-of-proficiency-for-midwives.pdf))

# Providing breast milk for your baby

## If your baby is born prematurely you will be encouraged to express milk for them very soon after birth.

Whilst this can be overwhelming and a lot for you to process, the midwives, nurses and feeding specialists will be on hand to talk to you and help you with expressing, storing and delivering your breast milk to your baby. This leaflet is designed to share some of the science behind the benefits of breast milk for preterm babies.

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### When can I start expressing breast milk for my baby?

Although you may give birth early, your body will still be able to make breast milk, but your breasts will need the stimulation of regular expressing to start and maintain breast milk production.

### Expressing before your baby is born

You can start expressing breast milk for your baby even before they are born. You must discuss this with your doctor or midwife before you start as **antenatal expressing should only be done once it is certain that you will give birth to your baby in the next few hours.**

You can discuss this with the obstetric and midwifery team to support your decision.

- Antenatal expressing can be done by hand or by pump. Expressing encourages your breasts to have milk available at birth. This would mean your breast milk can be one of the first (and most important) treatments your baby receives.

### Expressing after your baby is born

- Evidence shows that if you can **express within the first 1 – 2 hours after giving birth**, your milk volumes will be over double by 7 days (compared to if you wait until later than 2 hours after giving birth), and this difference continues until at least 4 weeks.



## Frequency of expressing:

- When it is possible having as much skin to skin contact with your baby will help with milk production.
- Aim to express **8 to 10 times in every 24 hours**; Staff can help with both hand expressing and using the pump.
- **Night time expressing** is important because that is when the hormone receptors are most ready to stimulate milk production. Although challenging it will help with establishing your supply. You may need to set an alarm as expressing in the night is important to help stimulate milk production.
- It may seem frustrating when very little milk comes out initially, but this stimulation will be important to get breast milk production established. **Every drop of breast milk counts and gives your baby important nutrients.**

## Increasing breast milk supply:

Sometimes, despite regular expressing, your milk supply may start to fall. Feel free to talk to us about this, but there are also things we recommended you do to help increase your breast milk supply:

- Increasing the amount of contact and skin to skin you have with your baby (Staff will support you with this).
- Expressing near your baby, thinking about your baby, and looking at photos of your baby while you express.
- Exchanging a muslin cloth or item of clothing with your baby that has been near you. They will be comforted by your smell and you can touch and smell something that your baby has been close to when you are expressing.
- Looking after yourself by staying hydrated, eating well and getting rest when you can.
- Increasing the frequency of expressing attempts: try hand expressing and using the pump.
- Checking you have a good fit with the pump. There are different size shields available and you can ask one of the staff to help you check you have the right one.

## Donor breast milk

Your fresh breast milk is the most important nutrient to give to protect premature babies. Where possible, we avoid giving formula for premature or very low birth weight as it can increase the risk of a very serious gut complication (**Necrotising Enterocolitis (NEC)**), as well as eye and lung problems. We will do everything we can to support you to produce your own breast milk to give to your baby, but when necessary, for example while your milk volume is increasing, with your agreement we will offer Donor Breast Milk for all babies <32 weeks gestation or under 1.5kg. Donor Breast Milk is a highly regulated, **pasteurised** product obtained from a breast milk bank.

If you require further support with feeding please ask your midwife or baby's nurse to contact your local Infant Feeding Specialists.



GIG  
CYMRU  
NHS  
WALES



Llywodraeth Cymru  
Welsh Government

## Appendix D

### Pre-hospital management of babies born extremely preterm: A Framework for Practice.

#### Assessment

- Prioritise maternal health: Is the mother stable?
- If possible, establish gestation to determine pathway.

#### Up to and including 21+6 weeks' gestation: Comfort focused care

##### Support parents to provide comfort care and ease their emotional distress

- Encourage parents to provide comfort for their baby if they feel able to
- Where they do not feel able ensure a crew member provides care
- Reassure that occasional gasping or reflex movements of limbs do not indicate distress
- Help parents to give close comfort and cuddling to keep baby warm and secure
  - Skin to skin contact where possible. Plastic bag wrapping is not appropriate
- Facilitate memory making for parents prior to and during conveyance

##### Destination

- Prioritise health of the mother

#### From 22+0 weeks' gestation, or if gestation is unclear: Survival focused care

##### 1. Optimise ambient temperature

↓ Baby will get cold

##### 2. Defer cord clamping

↓ 60 seconds

##### 3. Maintain baby's heat

↓ Place feet-first in a polythene bag up to the neck immediately after birth

Do not dry beforehand

↓ Hat and warm blanket over polythene bag  
 Place swaddled baby on a heated mattress if available

##### 4. Maintain airway/breathing

↓ Neutral position, gentle stimulation

Airway/breathing support

↓ 5 gentle inflation breaths, then ventilation breaths – 30/minute

Preterm face mask, room air

Increasing heart rate best indicator of lung inflation

↓ Do not unwrap baby to reassess

##### 5. Chest compression

↓ Not indicated below 24 weeks' gestation

##### 6. Consider reorientation of care

↓ Where absent heart rate despite airway support, and destination not imminent

If in doubt, continue ventilation breaths until arrival

##### Destination

- Keep mother and baby together if possible
- Priorities are health of the mother and neonatal expertise for the baby
- Labour ward generally preferred over Accident and Emergency department
- Make sure destination aware of imminent arrival and circumstances.

#### Communication

Ensure empathetic and honest communication



British Association of  
Perinatal Medicine



Royal College  
of Midwives

## APPENDIX E – Powys Community Kit List

<b>Suture Pack Yellow</b>	
Suture Kit	
Vicryl Rapide 2/0	2
Vicryl Rapide 3/0	1
Sterile Gloves	1
Sterile Tampon	1
10ml Syringe	2
Lidocaine 1% 10mls	2
21g needle (green)	4
25g needle (orange)	1
Diclofenac 100mg PR	1
Sterile raytec gauze x 5	2
Head torch	

<b>Venepuncture Red</b>	
Community Sharps Box	
Blood bottles & vacutainer:	
Blood forms	
Needles for bottles	
Alcoswabs	
Cotton wool	
Butterfly 20mm spot plasters	

<b>SROM &amp; Cord Prolapse Pack</b>	
<b>White Long</b>	
Disposable speculum	1
Sterile pack	1
Aqua gel sachets	
sterile gloves	1
IV administration set	1
Sodium Chloride 500mls	1
12ch foley catheter with pre-filled syringe	1
White luer lock spigot	1
ROM Plus Test	1
non sterile gloves	1
Indwelling catheter bag	1

<b>Intrapartum Green</b>	
Sterile gloves	2
non Sterile gloves	
plastic apron	2
goggles	1
FFP3 mask	1
Clinical waste/Tiger bag	1
Red plastic linen bag	1
Maternity pads	
Amnihook	2
10ml syringes	1
2ml syringes	2
25g needle (orange)	2
21g needle (green)	2
Alcohol swabs	2
Cord clamps	2
Vitamin K oral syringe	1
<b>Drugs</b>	
Syntometrine 1ml	2
Syntocinon 10iu in 1ml	5
Ergometrine 500mcg in 1ml	2
Adrenaline 1:1000 in 1ml	2
Dextrose Gel	1
Vitamin K	2
Red blunt filling needle	2

<b>Postnatal pack - Small Black</b>	
Sterile gloves	
non sterile gloves	
Sterile stitch cutter	
Sterile dressing pack	
MC & S swabs	2
NST screening card	1
NST lancets	2
Alcohol swabs	2
Vitamin K	2
1ml syringes	2
25g needles	2
Spot plasters	

<b>Antenatal Pack Blue</b>	
Sphygmomanometer	1
Medium adult cuff	1
Large adult cuff	1
Stethoscope	1
Urinalysis Glucose Protein pot	1
Alcohol hand cleaner	1
Urine specimen bottles	1
Gallipot	1
Paper tape measure	2
Thermometer - Welsh Allan	
Thermometer probe cover	
Pinards stethoscope	1
Fetal doppler sonicaid WP	1
Aquagel	
Gestation calculator	
spare battery for doppler	
SATS Finger probe	1
& spare batteries	

<b>Front Pocket of Bag</b>	
Delivery Pack	1
Non sterile maternity pads	
Inco pads	
Placenta yellow bag	
Towel	
Full gown disposable	
Overhead face visor	

<b>Entonox Bag</b>	
Entonox Cylinders	2
Entonox tubing	1
spare mouth pieces	2
I-Gel green - size	2
I-gel white - size	2
Rebreathe mask with tubing	
Adult BVM	1

<b>IVI Pack Black Long</b>	
IV administration set	2
NaCl 0.9% 1000mls	1
NaCl 0.9% 500mls	1
NaCl 0.9% 10mls	2
Cannulation pack	1
16g IV cannula (grey)	2
18g IV cannula (green)	2
IV cannula dressing	2
10mls syringes	2
Three way tap connector	1
Micropore	1
non sterile gloves	
Blood bottles (FBC & G&S)	1
Drugs additive label	2

<b>Front Inner Document pocket</b>	
Part one	
Part two/three	
Proformas for emergencies	
Continuation sheets	
Obs Cymru paperwork	
SBAR	
Transfer flow charts	
Taxi phone numbers	
Infant ID bands x 2	

<b>Oxygen Bag</b>	
Oxygen Cylinder	1
Infant BVM single use	1
Disposable laryngoscope	2
Face masks for infant BVM Size 00,0&1	1 of each
Disposable suction unit	1
12g black suction catheter	2
Paediatric stethoscope	1
Hat	2
5ml syringe	1
i-Gel - Size 0&1	1 of each
Aquagel Sachet	1
Plastic bag	2