



Coventry & Warwickshire Local Maternity & Neonatal System (LMNS)

Implementation of BAPM Perinatal Optimisation Passport

Date: November 2023

Version: 1

Coventry & Warwickshire LMNS Organisational Structure

The LMNS includes 3 acute trusts providing maternity services:

- University Hospital Coventry & Warwickshire NHS Trust (UHCW)
- George Eliot Hospital NHS Trust (GEH)
- South Warwickshire NHS Foundation Trust (SWFT)

The LMNS ambition is for a safe, personalised, kind, professional and family friendly service, where every woman has access to information to enable her to make decisions about her care; and where she and her baby can access support that is centred around their individual needs and circumstances. All staff are supported to deliver care which is women, baby and family centred; working in high performing teams in organisations which are well led, in cultures which promote innovation, continuous learning and which breakdown organisational and professional boundaries.

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Abbreviations

BAPM	British Association of Perinatal Medicine
CP	Cerebral Palsy
CPAP	Continuous positive airway pressure
EFW	Estimated Fetal Weight
HFT	High Flow Therapy
GBS	Group B Streptococcus
GEH	George Elliot Hospital NHS Trust
LMNS	Local Maternity and Neonatal System
MNVP	Maternity and Neonatal Voice Partnership
NEC	Necrotising Enterocolitis
NICU	Neonatal Intensive Care Unit
OCM	Optimal Cord Management
PTL	Pre term labour
PVH	Periventricular haemorrhage
sIVH	Severe Intraventricular Haemorrhage
SWFT	South Warwickshire NHS Foundation Trust
UHCW	University Hospitals of Coventry and Warwickshire
VG	Volume Guarantee (Ventilation)
VTV	Volume Targeted Ventilation



Clinical Pathway

1. Introduction

The BAPM Perinatal Optimisation pathway (Fig 1) is a bundle of care developed to implement the elements aimed at improving preterm outcomes by reducing death and brain injury in preterm babies.

Components needed for improving Perinatal quality of care and developing safe and person-centred pathways or care are:

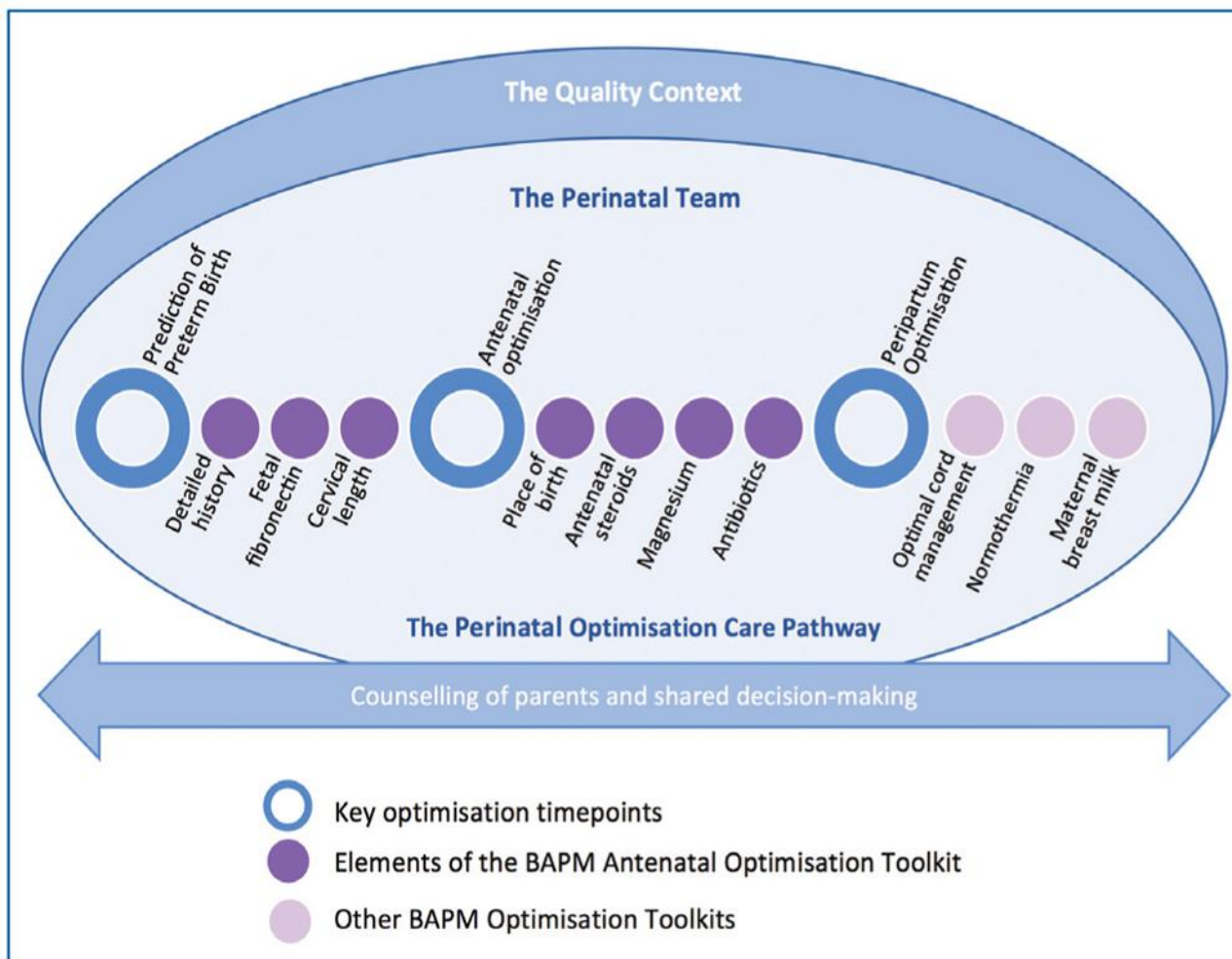
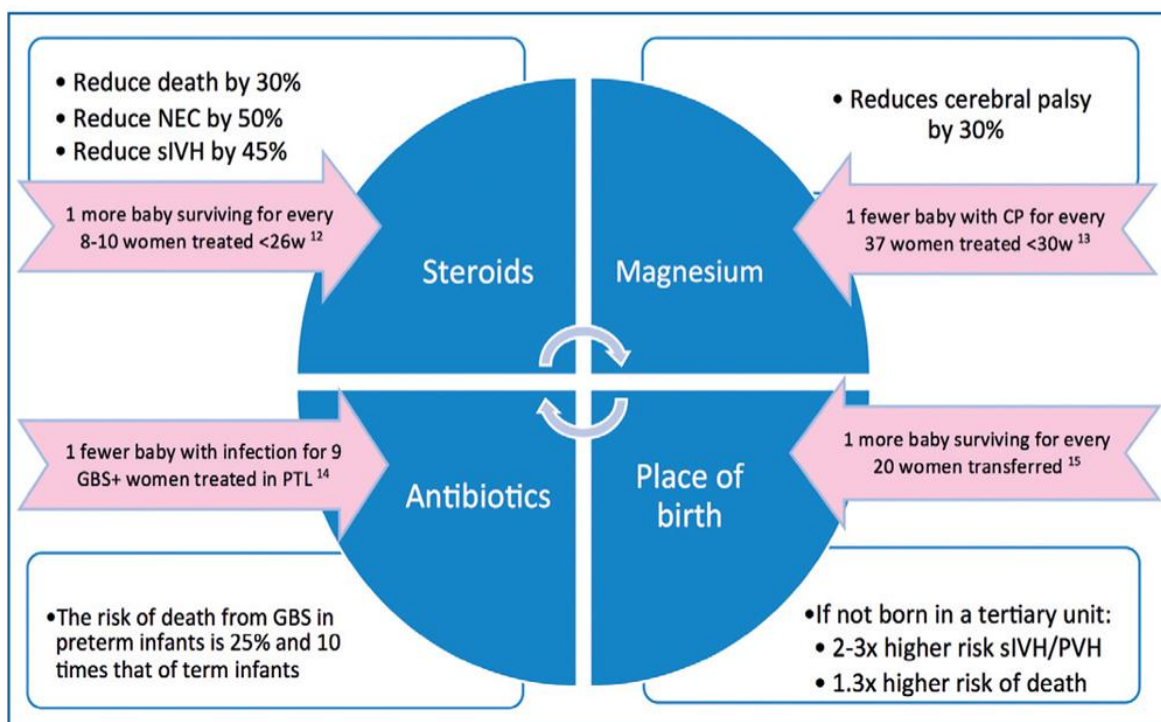
- 1 A strong partnership among all stakeholders to promote teamworking, shared goals and positive communication.
- 2 Developing a cohesive Perinatal team and context to develop the care bundle and processes that adds value.
- 3 A quality improvement culture to drive the improvement of each element and maintain the gain.
- 4 Parents are actively involved in decision making about their baby's care and promote co-production with the MNVP.

2. Description of Pathway

BAPM originally recommended 7 perinatal optimisation elements. They have added another two neonatal elements from PeriPREM optimisation passport. Following nine maternal and baby antenatal, perinatal, and postnatal evidence-based care elements as a bundle of care:

1. **Place of birth:** Babies <27/40, EFW <800g or multiple pregnancy <28/40 should be born in maternity centre with a NICU.
2. **Antenatal Steroids:** Women giving birth before 34 weeks should receive a full course of steroids no longer than seven days prior to birth.
3. **Antenatal Magnesium:** women giving birth before 30 weeks should receive a loading dose and ideally a four-hour infusion in the 24 hours prior to birth.
4. **Antibiotic Prophylaxis:** women in established preterm labour should receive intrapartum antibiotic prophylaxis to prevent early onset GBS infection.
5. **5a. Early breast milk (antenatal information):** women at risk of preterm birth should receive information about the importance of breast milk.
6. **Optimal cord management (OCM):** the umbilical cord should be clamped at or after one minute following birth.
7. **Thermal Care:** babies should have an admission temperature taken within one hour and this should be between 36.5-37.5 C.
- 5b. **Early breast milk:** all mothers should be supported to express within two hours of birth. All babies should receive their own mother's milk within 24 hours of birth and ideally within six hours.
8. **Respiratory management:** where ventilation is required, Volume targeted ventilation (VTV) should be used as the initial mode of ventilation to reduce lung injury
9. **Caffeine:** all babies born <30 weeks/< 1.5 kg (consider up to 32-34 weeks) should receive Caffeine within 24 hours of birth to reduce brain injury and chronic lung disease and improve neurodevelopmental outcome

Figure 1: BAPM perinatal optimisation pathway





3. **Passport implementation process**

This package of care is to give premature babies, born before 34 weeks' gestation the best chance at birth and protect their brain. Every baby is unique and every baby's entrance into the world is different. Some items/elements on the pathway may not be possible or may be contraindicated. The perinatal team are to explore this together with the woman/parents

- The Perinatal Team should strive to deliver each element of care for mother and baby in a timely manner and record it in the clinical passport (Figure 2.0).
- The Clinical passport is to be kept in mother's note until birth and then handed over to neonatal team and filed in the baby's notes.
- In case of in utero/ex utero transfer, the clinical passport should be sent along with the patient's records and documents to the receiving unit via the transport services.
- The Baby passport (Figure 3.0) should be used by the perinatal team during antenatal counselling and given to parents to aid discussion, promote shared decision making and empower parents when discussing their own and baby's care.
- Perinatal and Quality leads to ensure data is transferred anonymously from the clinical passport to Perinatal Optimisation tool (excel sheet) and verify the accuracy of data collected from electronic/paper patient record.
- For any of the given elements, if care could have been delivered but not achieved or achieved outside the definition as described in clinical passport, the reason should be recorded.
- Any themes identified should be used by the Quality improvement team to develop change ideas to ensure the gain is maintained and becomes a driver for improvement of each element. In addition, this process will support data quality improvement within each unit as well as Quality Improvement processes (such as NEO-TRAIN QI initiative at University Hospitals Coventry and Warwickshire NHS Trust).
- Each unit should display the Monthly dashboard printed from Perinatal Optimisation tool excel sheet on their maternity and neonatal unit.
- The Perinatal team are to ensure effective and continuous learning from adverse events / incidents, excellence and near misses are recorded and discussed in the joint huddles and through forum such as Perinatal QIPS and Maternity and neonatal Safety champion meeting.
- Perinatal leads to provide data set to LMNS Business intelligence support within Coventry and Warwickshire Integrated Care Board.
- LMNS to work with individual units and may undertake independent sample audits to ensure the accuracy of data provided.
- This data set and learning themes are to be presented in Quality meetings at each unit and at the LMNS Quality and safety meeting and will be included in neonatal dashboard produced for LMNS board meeting.



Perinatal Optimisation Pathway Passport



British Association of
Perinatal Medicine

This passport must be completed for all women at risk of birth before 34 weeks' gestation and should accompany the baby on admission to neonatal care.

Time of birth: ___ : ___ Type of birth: Time of admission to NNU: ___ : ___ Gestation: /40 Birth weight: g Apgars: @1 @5 @10 Booking Hospital:	Name: DOB: Hosp No: NHS No: Or patient sticker here
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1. Place of Birth:

Aim: babies <27/40, EFW <800g or multiple pregnancy <28/40 should be born in maternity centre with a NICU



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

Y N N/A

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

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

Was a 4-hour infusion given within 24 hours prior to birth?

Y N

If optimally-timed Magnesium was not achieved, why?

4. Antibiotic Prophylaxis



Aim: women in established preterm labour should receive intrapartum antibiotic prophylaxis to prevent early onset GBS infection

Required? Y N

Given more than 4hrs before birth? Y N N/A

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

5a. Early Breast Milk (antenatal info)



Aim: women at risk of preterm birth should receive information about the importance of breast milk

Antenatal counselling and advice for mother re benefits of MBM and early & frequent expressing?

Y N

Supplemental information given eg. Written / digital

Y N

If not given, why?

6. Optimal Cord Management (OCM)



Aim: the umbilical cord should be clamped at or after one minute following birth

Was the umbilical cord clamped at or after one minute?

Y N

Time of OCM: minutes

seconds

If no OCM, why?

7. Thermal Care



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 Breast Milk



Aim: all mothers should be supported to express within 2 hours of birth

All babies should receive their own mother's milk within 24 hours of birth and ideally within 6 hours

Mother helped to express within 2h of birth?

Y N

Date:

/ /

Time:

:

Colostrum first available:

Date:

/ /

Time:

:

Colostrum given to baby:

Date:

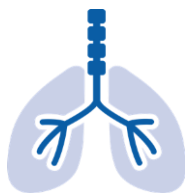
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Time:

:

If not achieved within first 24h, why?

8. Respiratory Management:



Aim: Where ventilation is required, Volume targeted ventilation (VTV) should be used as the initial mode of ventilation to reduce lung injury

Respiratory support required prior to neonatal unit admission (tick all that apply)

CPAP HFT Ventilation Other

Was VTV/VG ventilation used as initial mode of ventilation if ventilated in first 72 hours?

Y N N/A

If VTV/VG not used as initial mode of ventilation, why?

9. Caffeine:



Aim: To reduce brain injury and chronic lung disease and improve neurodevelopmental outcome. Give to babies <30 weeks/<1.5kg (consider up to 32-34 weeks) within 24 hours of birth

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?





Perinatal Optimisation Passport



This is a package of care to give premature babies the best chance at birth and protect their brain. Every baby is unique and every baby's entrance into this world is different. Some items on this list may not be possible. 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.

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.

Not Possible In Progress Complete

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 Breast Milk

(for all babies born before 34 weeks)



I have been given information about the benefits of early breast milk and have been shown how to express to make this milk for my baby(ies) before or within an hour of birth.

Not Possible In Progress Complete





Perinatal Optimisation Passport



Antibiotics

(for all babies born before 34 weeks where mum was in labour)



I have been given antibiotics to reduce the chance of my baby(ies) developing an infection called Group B Strep.

Not Possible In Progress Complete

Optimal Cord Management

(for all babies)



After my baby(ies) is born, the team will wait at least a minute before clamping the cord, to allow my baby to be born safely and get extra blood from the placenta.

Not Possible Complete

Thermal Care

(for all babies born before 34 weeks)

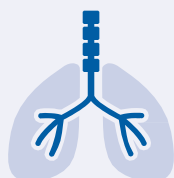


After my baby(ies) is born, the team will try to keep their temperature normal and will help us to hold baby skin-to-skin as soon as it is safe.

Not Possible Complete

Respiratory Management

(for babies born before 34 weeks who may need it)



If my baby(ies) needs help with a breathing tube, the neonatal team will protect their lungs by using a special ventilator setting.

Not applicable Not Possible Complete

Caffeine

(for all babies born before 30 weeks and some babies born less than 34 weeks or who weigh less than 1500g)



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

Not Possible Complete

**It can be hard knowing that things could have been different.
Please speak to your midwife or doctors if you are struggling with this.
You are not alone.**

www.bapm.org/pop

www.weahsn.net/periprem

This resource has been modified with kind permission from PERIPrem.





References

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Acknowledgement: South West and West of England AHSN (Academic health and science Network)

Links to access BAPM passports

Baby passport

[POP Baby Passport 9 HIGH-RES.pdf \(amazonaws.com\)](#)

Clinical passport

[PowerPoint Presentation \(amazonaws.com\)](#)