



Best use of ANTENATAL STERIODS



British Association of
Perinatal Medicine

FOR ALL BABIES BORN <34 WEEKS

Use QUIPP and cervical length to predict preterm delivery.

If...

- patient is expected to give birth within 7 days
- no other steroids given within the last 2 weeks
- survival focused care for baby is anticipated

...start steroid course now.

Aim to give a full course of steroids more than 24 hours before birth. Shortened course durations of less than 24 hours are not currently recommended.^{1,2,3,4}



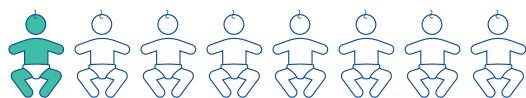
STERIODS REDUCE THE RISK OF

Neonatal
death by
22%

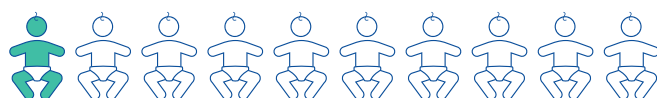
NEC by
50%

Grade 3-4
IVH by
45%

NUMBER OF WOMEN WE NEED TO TREAT TO PREVENT ONE INFANT DEATH



23-24 weeks



25 weeks



Scan QR code for
QUIPP app and
References

Celebrate your successes!
Investigate every missed case
Record doses and timing in maternal notes and Badgernet.



OPTIMAL CORD MANAGEMENT



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FOR ALL BABIES: CORD CLAMPED AT OR AFTER 1 MINUTE AFTER BIRTH

EFFECTS OF OPTIMAL CORD MANAGEMENT (OCM)

decreased mortality by nearly a **third** for preterm infants

Number of infants =<28 weeks that need to get OCM to **save a life** is **20**

Fogarty 2018



Successful implementation of OCM requires effective perinatal team working. Consider the below:

Perinatal team simulation

How to stabilise the infant during OCM

Build a strong perinatal team culture through OCM training

Thermoregulatory care e.g. use a sterile plastic bag

OCM is **safe** for **multiple pregnancies**

Jegatheesan et al 2018

OCM MULTI DISCIPLINARY TEAM



Parents



Obstetric and Midwifery Team



Neonatal Team



Theatre Team



Anaesthetic Team



Record timing of cord clamping in **delivery paperwork** and **Badgernet**, and investigate every missed case

www.bapm.org/pop

www.weahsn.net/periprem

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EARLY BREAST MILK



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**WITHIN 6 HOURS OF LIFE FOR
BABIES BORN <34 WEEKS**

**FIRST MBM CAN BE GIVEN AS
MOUTH CARE/NON-NUTRITIVE FEED**

Milk production increases with time spent
skin-to-skin for preterm infants

Lau et al 2007



Expressed breast milk volumes
are significantly more if
pumping is started
within 2 hours of birth

Parker et al 2012

Pumping 8-10 times a day
improves expressed volumes

Furman et al 2002

Hill et al 2005

Receiving breast milk instead of formula
reduces risk of NEC by two thirds

Quigley et al 2014

Oropharyngeal colostrum **reduces risk of ventilator
associated pneumonia** (by 60%)

Ma et al 2020

Breast milk instead of any formula **protects against ROP**
(risk decreased by 70%)

Zhou et al 2015

Breast milk **improves IQ** by at least 5.9 points

Kramer et al 2008



Record time of first breast milk on
Badgernet (UNICEF field)

**STRONGLY ENCOURAGE AND SUPPORT
ANTENATAL AND IMMEDIATE
POSTNATAL EXPRESSING**

This needs the whole perinatal team!

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MAGNESIUM SULPHATE



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FOR ALL BABIES BORN <30 WEEKS

Use of magnesium sulphate in preterm labour **reduces the risk of cerebral palsy by 30%**



4g bolus 1g/hr

Administer prior to transfer, ideally within **4-24 hours** of birth.
For emergency deliveries, try to administer at least at loading dose.

For planned deliveries – ensure loading dose
and at least 4 hours of maintenance infusion.

1 case of cerebral palsy
is prevented for every
37 mothers who receive
magnesium sulphate.



There are **no long term side effects** of magnesium sulphate for mothers but during administration they can feel rather **unwell** and feel a **“burning”** sensation

CONTRAINDICATIONS

Myasthenia gravis

It is the patient's right to have the choice to decline



Consider giving magnesium sulphate if transferring out in early labour. Record administration on Badgernet and investigate missed cases.





THERMO REGULATION



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**BABIES BORN <34 WEEKS SHOULD HAVE A FIRST
TEMPERATURE MEASURED WITHIN ONE HOUR
OF BIRTH, WHICH IS BETWEEN 36.5–37.5°C**

WHY DOES IT MATTER?

Hypothermia in preterm infants
increases risk of:

- hypoglycaemia
- metabolic acidosis
- respiratory distress and acidosis
- necrotising enterocolitis
- coagulation defects
- intraventricular haemorrhage

McCall et al 2018



**FOR EVERY 1°C DECREASE IN
ADMISSION TEMPERATURE
MORTALITY INCREASES BY 28%**

Laptook et al 2007



**IMPROVE TEMPERATURE BY:
PLACING THE BABY IN A
PLASTIC BAG AT BIRTH
AND USING A HAT**



**TAKE CARE TO ENSURE THERMAL
STABILITY DURING RESUSCITATION**



**USE BAPM QI TOOLKIT TO INVESTIGATE
HYPOTHERMIA + IMPROVE OUTCOMES**

www.bapm.org/normothermia



www.bapm.org/pop

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INTRAPARTUM ANTIBIOTIC PROPHYLAXIS



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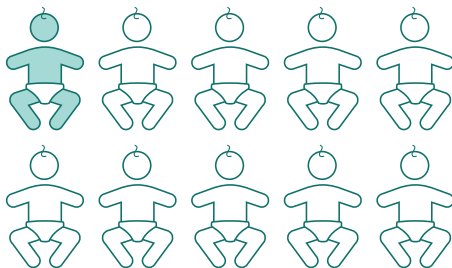
Women in established preterm labour <34 weeks should receive optimally timed Intrapartum Antibiotic Prophylaxis (ie 4-24 hours prior to birth)

Women should receive intrapartum antibiotic prophylaxis **irrespective** of whether they have ruptured **or** intact membranes

The risk of **death** from **GBS sepsis** in preterm infants is **25%**

Intrapartum antibiotics reduce the risk of neonatal **GBS sepsis** in GBS colonised women by **86%**

NNT 10 to prevent 1 infant being born preterm with GBS



Reduce the risk of **delivery** within a week by **20%**

Reduce the risk of abnormal neonatal **cranial ultrasound** findings by **20%**



The antibiotics of choice are Benzylpenicillin or Cephalosporins / Vancomycin in penicillin allergic women. Confirm agent with your local antimicrobial guidelines. Record administration of intrapartum antibiotics on Badgernet.

Fairlie et al 2013, Kenyon et al 2013, NICE11, RCOG guideline No.36.

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PLACE OF BIRTH



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**<27 WEEKS OR
<800G in a maternity centre
with a co-located NICU
<28 WEEKS IF MULTIPLE BIRTH**

2-3 fold higher risk of **severe brain injury** if transferred to a NICU *ex utero*

NNT 8

1.3 times the odds of **death** if born in non-tertiary centre whether transported or not

NNT 20



QUIPP

Work as a team to **identify promptly** women in **suspected, diagnosed** or **established preterm labour**



Collaborate with ambulance services to ensure prompt transfer



Exception reporting for babies <27 weeks born in a maternity unit without a co-located NICU

Helenius et al 2019

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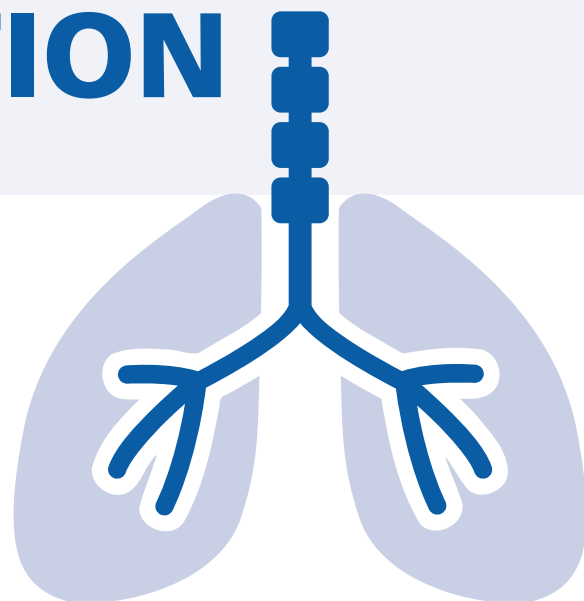




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VOLUME TARGETED VENTILATION

Volume targeted ventilation (VTV) is synonymous with Volume Guarantee (VG). VTV protects premature lungs from lung trauma. Triggered VG is preferred as infant-initiated breaths are less likely to cause lung injury.



EFFECTS

**Reduces
Hypocarbia**

by half
(NNT 3)

**Decreases
risk of
pneumothorax**

by at least
a third

**Reduces
Grade 3-4 IVH**

by half (NNT
to prevent one
IVH is 11)



HOW TO IMPLEMENT VTV

Integrate into Unit SOP

Train all staff on how to use VTV

Introduce VTV to new staff at induction

Use VTV as soon as possible
after intubation





CAFFEINE



British Association of
Perinatal Medicine

**FOR ALL
BABIES BORN
<30WKS OR <1.5KG
CONSIDER FOR BABIES UP TO 32-34 WEEKS**

EFFECTS

**Less neurodevelopmental
impairment at 18-21 months**

(Schmidt et al 2007)

**Less Cerebral Palsy when
used at extubation**

(Shepherd et al 2018)

Less Chronic Lung Disease

(Schmidt et al 2006, Gary et al 2011)

**Lower rate of extubation
failure within 7 days**

(Henderson-Smart et al 2010)

**Improved white matter
development in the brain**

(Doyle et al 2010)



START WITHIN 24 HOURS OF BIRTH

To reduce the number of days on respiratory support

(Davis et al 2010)

DOSE

20mg/kg bolus IV → 5-10mg/kg daily

HOW TO ENSURE IT IS ALWAYS GIVEN

Use a preterm admission bundle/checklist

Neonatal Unit Pharmacist Checks

Unit Caffeine Champions



DON'T HAVE YOURS UNTIL THEY'VE HAD THEIRS!

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