Good Afternoon and Welcome

Whose blood is it anyway?
Aristotle 300BC

Frequently the child appears to be born dead or it is feeble but before the tying of the cord, a flux of blood occurs into the cord and adjacent parts. Some nurses squeeze the blood into the baby’s body and at once the baby, who had previously been as if drained of blood, comes to life again.
• 1960-70’s. Oxytocic drugs were introduced and Immediate Cord Clamping became routine practice.

• No thought was given to the effect of immediate cord clamping on the fetus.

• There is no evidence to support immediate cord clamping.
The complete circuit and baby’s safety net
Cord Clamping the Evidence
Professor Judith Mercer Emeritus
Midwife and Lead expert OCC
Benefits of DCC for Prems.

Decreases risk of:
• Intraventricular haemorrhage
• Necrotizing enterocolitis
• Late-onset sepsis
• Need for blood transfusions
• Need for ventilation

Increases:
• Haematocrit
• Haemoglobin
• Blood pressure
• Cerebral, lung and organ oxygenation
• Red blood cell flow
• Breast feeding duration
Neurological development with DCC

• Recent animal and human studies suggest that early cord clamping before the onset of spontaneous respirations appears to adversely affect cerebral perfusion during fetal to neonatal transition.

• Mercer et al. 2016 Demonstrated improved motor function at 18–22 month corrected age with DCC combined with a one-time UCM compared with ICC.

• Rabe et al. 2016 Demonstrated similar outcomes with UCM compared with DCC at 2 and 3.5 years of age.

• Andersson et al. 2015 Demonstrated improved fine motor and social domain scores at 4 years of age, especially in boys following DCC.
Diane Farrar et al 2010

Weighing babies to assess placental transfusion
Changes in guidelines – Timeline

• WHO 2007 (Updated 2012)
  Delayed umbilical cord clamping should be performed during the provision of essential neonatal care.

• RCOG 2009
  Cord should not be clamped earlier than is necessary, based on a clinical assessment of the situation.

• Royal College of Midwives 2012
  Midwives should be competent in both active management and physiological management.
  When women are offered physiological third stage as a reasonable option, many will choose it.

• NICE Guidelines 2014
  Do not clamp the cord earlier than 1 minute from the birth of the baby unless cord or the baby has a heartbeat below 60 beats/minute that is not getting faster. (All babies)
#Waitforwhite
Informed Choice

• Delayed cord clamping as part of active or physiological management.

• Physiological 3rd stage should be considered as default management in the absence of pregnancy complications,

• Neonatal resuscitation with the umbilical cord intact whenever possible
Active Management

• Oxytocic drug following delivery of the baby.
• Immediate recommended by NICE but autonomous practice. Many midwives delay administration.
• Delayed/Optimal Cord Clamping.
• Controlled Cord Traction.
• 2010 – Cochrane review showed timing of oxytocic made no significant difference to risk of pph.
• New Zealand Guidance -No oxytocic before clamping.

• Assessing and managing the risk of pph is important.
What’s the rush?
No resus, No bleeding, No rush!
Nuchal Cord
Somersault Manoeuvre
Cord Clamping the Evidence

Taking blood gases + Kleihauer Bloods

• Cord Blood samples can still be taken from a pulsating Cord. There is no need to clamp and cut.
• After taking the samples, apply gentle but firm pressure to the needle entry site as you would if taking venous blood.
Placental transfusion: a review
AC Katheria, S Lakshminrusimha, H Rabe, R McAdams and JS Mercer.

- Review of DCC, intact cord milking and cut cord milking.
- Milking 2-4 times gave same benefits as dcc
- Placental transfusion should be considered at every delivery as it can have a marked impact on the outcomes of newborns.
- No increase in jaundice or polycythaemia
Increased Jaundice?

In eight studies involving over 1000 neonates, there was no significant difference in risk of jaundice within 24–48 hours.

In the most recent meta-analysis of 1828 infants in five studies, there were no significant differences in clinical jaundice.
Gentle Sections

- DCC or milking
- Warm towel
- Bedside resuscitation if necessary.

Waiting to clamp the umbilical cord for 30 s after elective CS results in higher iron stores at 4 months of age compared with early cord clamping after vaginal birth, and seems to ensure iron status comparable with those achieved after 180 s delayed cord clamping after vaginal birth.

Andersson 2016
Not so Gentle Section
Lotus Sections
European Resuscitation guidelines 2015

• For uncompromised babies, a delay in cord clamping of at least 1 min from the complete delivery of the infant, is now recommended for term and preterm babies. As yet there is insufficient evidence to recommend an appropriate time for clamping the cord in babies who require resuscitation at birth.

• Until more evidence is available, infants who are not breathing or crying may require the umbilical cord to be clamped, so that resuscitation measures can commence promptly.

Recommendations for first 60 secs.

• Dry baby
• Assess tone, breathing + HR.
• If gasping or not breathing, give 5 inflation breaths.
• Reassess + check HR.
Development of the ‘Bedside Assessment, Stabilisation & Initial Cardiorespiratory Support’ (BASICS) Trolley

Basics/Lifestart Trolley
Basics/Lifestart Trolley
Conclusions

• Intact cord resuscitation is possible
• Bedside resuscitation is acceptable
• LifeStart trolley allows formal evaluation of deferred cord clamping

With very premature babies, resuscitation and deferred cord clamping are not mutually exclusive options
Cord/Baby blood donation.
It’s my Blood!
Blood to Baby
Hannah Tizzard

Optimal Cord Clamping. The single most important gift you can give your baby
Image: www.opieloto.com
**Optimal/Delayed Cord Clamping**

**Birth plan**
Let your birth attendants know your wishes, include optimal/delayed cord clamping.

**Baby's birth**
Baby will be placed with the cord still attached on mummy's tummy.

**Bonding**
Baby will be gently rubbed dry. Skin-to-skin contact will comfort your baby.

---

Fathers/birth partners are welcome to cut the cord, ideally once it has **stopped pulsating** but not <1 minute following birth.

When baby is weighed (usually after 1 hour skin to skin) baby will benefit from a higher birth weight due to the greater blood volume, giving baby a **better start**.

Finally rest well, keep distractions to a minimum and enjoy this time making a peace and loving bond with your baby.

---

**Hannah Tizzard – www.bloodtobaby.com**
Optimal Cord Clamping/#Wait for White

Contacts and Information

• amanda.burleigh@ntlworld.com
• Optimal Cord Clamping/#Waitforwhite (Facebook page)
• @optimalclamping