Optimal Cord Management:
A District General Hospital's experience

Northumbria Healthcare
NHS Foundation Trust

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“A typical NHS Trust”

- North-East England
- @3500 annual births
- 1 Obstetric Unit with neonatal unit
- 3 Free-standing Midwifery Led Units
- Homebirth service

Practice in 2009

- Cord Clamping was “Immediate”
- (ICC)

- Embedded in UK obstetric and
- midwifery practice for 50 years

- ICC became standard care
- in response to maternal and
- infant outcomes

Adopting OCM in September 2009

- Made physiological sense (Hutcheon, 2008)
- Introduced to obstetricians from the onset
- It offered a potential solution to a persistent problem

Term babies admitted to SCU

"starry-eyed"

"Shocked at birth"

↑ HR

Pallor

Cool peripheral skin

Prolonged capillary refill time

?Hypoxia

Introducing delayed cord clamping

We witnessed babies

“resuscitate themselves”

Multi-disciplinary working

Neonatal clinicians

- Team attending high-risk birth can request OCM

Birth care providers

- Can implement OCM and/or negotiate with other team members e.g. plan with the attending neonatal clinician for OCM

Delayed Cord Clamping:

A review of its introduction within a medium-sized UK consultant-led maternity unit.

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Background

This tentative review was undertaken to identify issues which could be examined in further studies to determine the impact of introducing "Delayed Cord Clamping for all" within an obstetric service providing low/high risk care.

Delayed Cord Clamping (DCC) was introduced within our maternity unit in 2009. DCC is recommended for up to 3 minutes within our low risk intrapartum care guidelines. A minimum of 1-2 minutes of DCC is advised for infants born by instrumental delivery/LSCS regardless of indication for delivery. This audit was planned to determine if this was being put into practice.

The resident neonatal staff , a team of Advanced Neonatal Nurse Practitioners (ANNP), work with the midwifery/obstetric teams to ensure infants benefit from DCC. Practice changes such as sitting alongside the obstetrician at instrumental deliveries were introduced.

Methods

A review of the most recent cohort of deliveries was undertaken. This looked at:

- Was DCC practised?
- How many babies required resuscitative measures?
- What proportion of infants born at term were admitted to the Special Care Baby Unit (SCBU) for respiratory care?
- These data were reviewed in light of what is known about resuscitation practice before the introduction of DCC.

Results

- 1973 births were reviewed (born late 2012-13)
- 1904 (96.5%) received at least 1 minute DCC
- 1456 (73.8%) received 2-4 minutes DCC
- 141 (7.14%) infants had an Apgar score <5 at 1minute
- 41 (2.07%) babies had Apgar score <7 at 5 minutes
- 81 infants were transferred to the resuscitaire for intervention (4.08%). Newborn resuscitaire measures in this instance were crudely identified as any action requiring transfer to a delivery room resuscitaire within the first 5 minutes of life.
- 50 (2.55%) were admitted to SCBU for respiratory care following delivery.
- Few (3.5%) of babies did not benefit from DCC
- Resuscitation incidence prior to introducing DCC was 15% (333/2470 births in 2006). At this time 4.5% of term infants were admitted to SCBU for respiratory problems.

Discussion

1. The introduction of DCC has resulted in a significant reduction in the number of babies born within our consultant-led unit receiving resuscitative measures at birth. Ashington now very much supports the practice of "assisted transition" from placental to pulmonary respiration. The act of delaying the separation of the infant from mother in itself appears to prevent infants *receiving* resuscitation that they don't *require*.

2. The only change in practice over the time period examined was DCC. In line with Kroll *et al* (1994) who demonstrated a dramatic reduction in resuscitation we also reduced the indications for ANNP attendance at birth over this time. However having an experienced midwife or ANNP attending births acting as an advocate for the baby (and DCC!) by holding their nerve in delaying the cord clamping of some compromised infants has also contributed to the decrease in intervention.

3. DCC is contraindicated if placental abruption was suspected or if an anteriorly positioned placenta was incised at caesarean section. Other reasons were cited such as cord snapping, PPH and a small number were attributable to non-compliance with the guideline.

4. DCC is explained and the women are reminded of this at the birth. Less separation from mother ensures our compliance with current requirement for facilitating skin-to skin contact at birth.

Future Action

- Consultant obstetricians and senior midwives will continue to remind junior staff at induction.
- Duration of DCC is now included in neonatal documentation which will facilitate further audit. The reason for NOT doing DCC has to be documented.
- Senior nurses and midwives attending delivery will continue to advocate DCC and the notion that allowing for normal physiological transition most babies will resuscitate themselves.
- A more formal project will add validity and transferability to the findings of this audit.

References

1. Kroll,L Twohey,L Daubeney,PE *et al* Risk factors at delivery and the need for skilled resuscitation. *Eur J Obstet & Gynecol and Reprod Biol* 1994; **44**: 175-7.

National recommendation has caught up with us (RCOG, 2015)

Cord should not be clamped earlier than necessary, based upon a clinical assessment of the situation

OCC has no adverse maternal effects

Emerging evidence shows OCC may reduce the need for resuscitation at birth

Preterm babies

"…facilitating quality improvement in optimal cord management"

What about the rare baby that requires resuscitation?

- Always plan to deliver at least 1 minute optimal cord clamping
- Use resuscitation platforms if available in your unit.

Optimising thermal stability, assessment of the baby and ensuring airway patency takes on minute.

Parental concerns

- Parents like it
- Position of the baby is not the concern it once was
- Aerating of the lung before clamping cord crucial

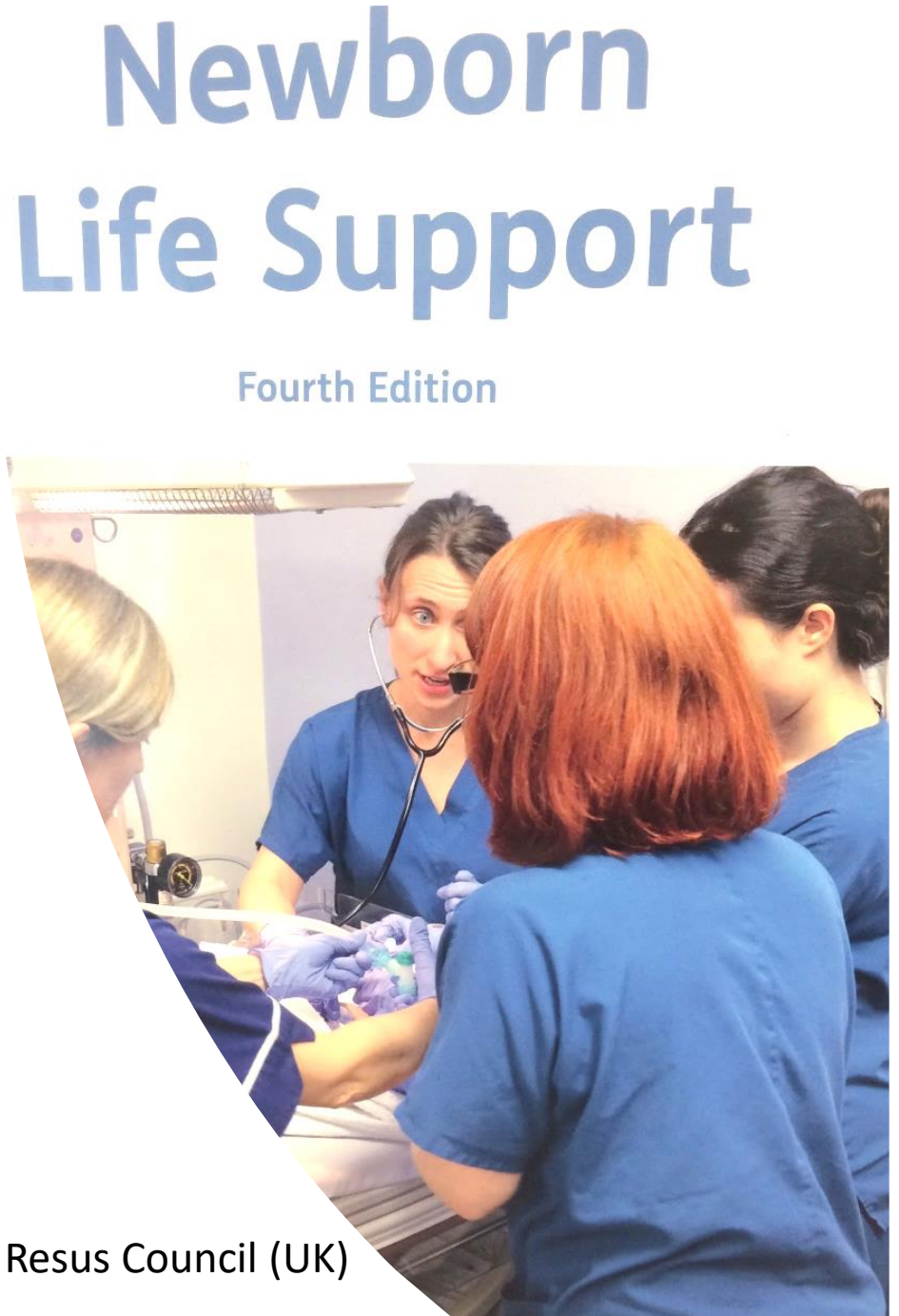
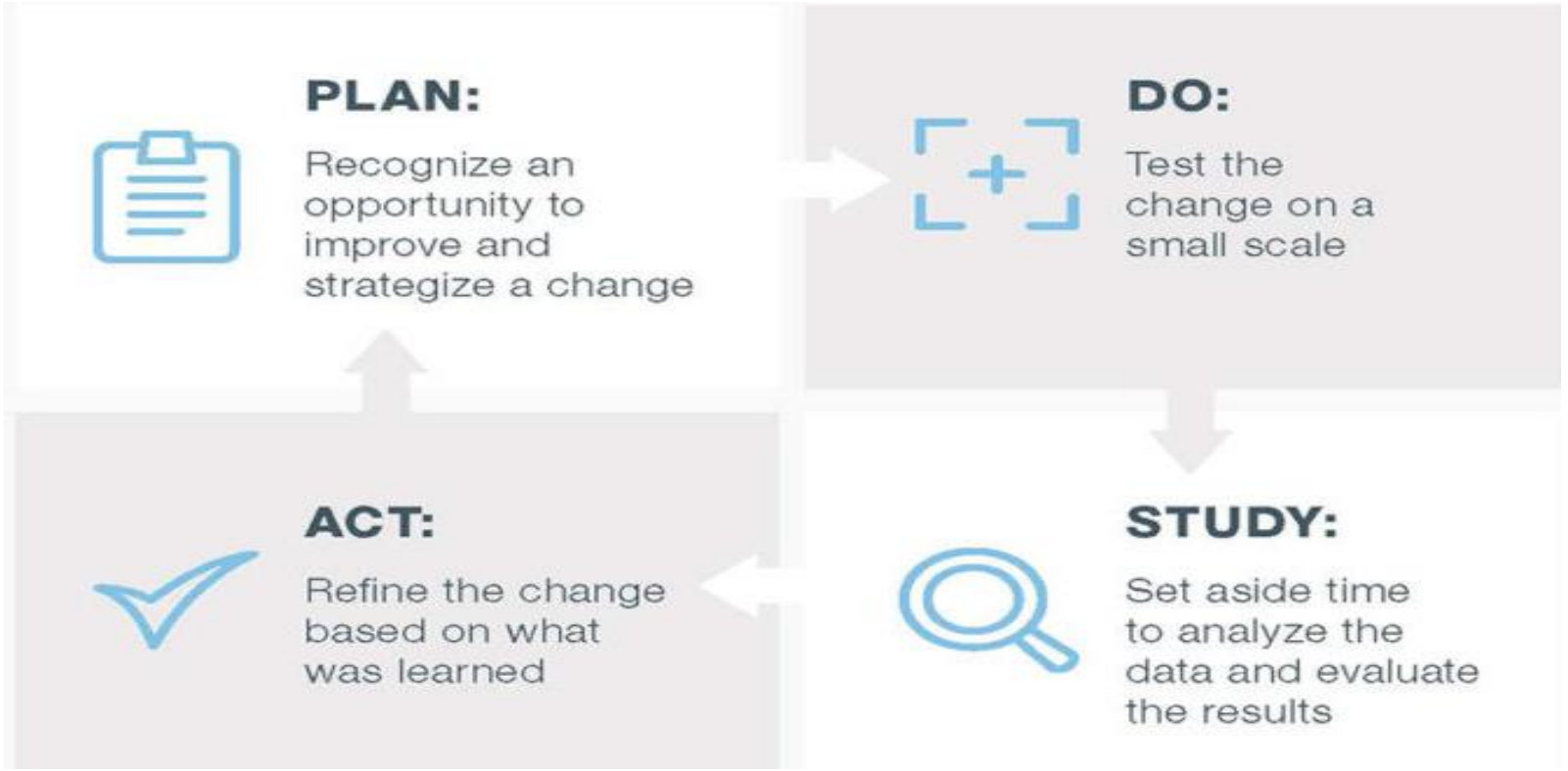


Photo Resus Council (UK)

The PDSA Cycle



Can be addressed as PDSA cycles

Look at the issues

Record keeping

Lack of staff awareness

Woman having LSCS not engaged in the issue

Clinician concerns

20%

Optimal Cord Management rates at caesarean section

Accurate record keeping of OCM

PLAN - Improve record keeping of cord clamp timing at LSCS

DO - insert sticker into to baby notes where timing of OCC - mandatory question on electronic maternity record

SEND - email to neonatal/midwifery/obstetric staff, informal discussion on detail on team brief

SEE - acquire data of OCC rates

ACT - some increase in OCC rate to address possible previous under reporting

Lack of staff awareness and clinical concerns

PLAN – To ensure all relevant professional teams are aware of why we are promoting OCM and why we do it.

DO –communicate to teams in practice and at relevant forums.

SELECT- look at who may have the best impact

SEE – continued audit of OCM rates

ACT - some increase in OCC rate to address possible previous under reporting

Addressing issues

Be positive! Objections, concerns and barriers are CONSIDERATIONS

Utilise the QI resource to formulate a list of small changes/improvements

Prioritise changes

Share ownership and progress

Northumbria 2020

23 infants < 34 weeks (13<32 weeks)

<u>OCM ≥1 minute 23/23- 100%</u>

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