

QI story, mapped to BAPM NSQI standards

Title of QI project: IMPLEMENTING LABOUR WARD CUDDLES AS PART OF GOLDEN HOUR STABILISATION FOR BABIES BORN < 30 WEEKS GESTATION – A FEASIBILITY STUDY

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Identifying the need for QI:

What were the triggers?
(Adverse Events, Guidelines, Service Standards, Benchmarking exercise, other)

NSQI 1 – Evidence Based Care

NSQI 12 – Benchmarking

NSQI 13/14 -Patient Safety

- The World Health Organization (WHO) strongly recommends skin-to-skin contact as soon as possible in babies weighing less than 2000 g (1).
- Parents separated from their newborn baby can suffer post-traumatic stress as a result of this experience which will have an impact on their long term mental health. The parents feel helpless at the cot side of a critically ill baby, and often have to wait for several days before skin-to-skin can be safely carried out (2, 3). This separation can affect their bonding, mental health and lactation.
- The oxytocin peak following delivery in the early sensitive period facilitates bonding and has anxiolytic and sedating effect (4). There is evidence, that bonding between mother and baby will result changes into the connections of the brain within few hours of delivery (6).
- There is also reasonable evidence to suggest that early skin-to-skin contact leads to increased breastfeeding in the early period following birth (5).
- Maternal-neonatal separation can be a source of 'toxic stress', and some suggestions are offered toward a 'zero separation' paradigm (6).
- Imperial neonatal service has a strong culture of Family Integrated Care, and supports parents to become partners in care from admission throughout the Integrated Family Delivered Care (IFDC) bundle.
- Bonding is challenging for parents with a baby born extreme prematurely. The high tech environment including respiratory support, central lines, high humidity needs and risk of IVH during the first few days limits skin-to-skin contact and bonding during the first week of life.
- Visual and physical contact in the delivery room ward as a first cuddle potentially can help the bonding process.

1. World Health Organization. (2015). WHO recommendations on interventions to improve preterm birth outcomes
2. Arnold L, Sawyer A, Rabe H, Abbott J, Gyte G, Duley L, et al. Parents' first moments with their very preterm babies: a qualitative study. *BMJ Open* 2013; 3: pii: e002487.
3. Baylis R, Ewald U, Gradin M, Hedberg Nyqvist K, Rubertsson C, Thernström Blomqvist Y. First-time events between parents and preterm infants are affected by the designs and routines of neonatal intensive care units. *Acta Paediatr* 2014; 103: 1045-52.
4. Mehler K, Wendrich D, Kissgen R, et al. Mothers seeing their VLBW infants within 3 h after birth are more likely to establish a secure attachment behaviour: evidence of a sensitive period with preterm infants? *J Perinatol*. 2011 Jun;31(6):404-10. doi: 10.1038/jp.2010.139. Epub 2010 Dec 9.
5. Moore ER, Anderson GC. Randomized controlled trial of very early mother-infant skin-to-skin contact and breastfeeding status. *J Midwifery Womens Health*. 2007 Mar-Apr;52(2):116-125

	6. Bergman NJ. Birth practices: Maternal-neonate separation as a source of toxic stress. Birth Defects Res. 2019 Jun 3. doi: 10.1002/bdr2.1530.
How did you initiate the project, and create momentum? NSQI 15 – QI structure & resources	Our aim in this feasibility study was to assess safety of the delivery room cuddles for babies born <30 weeks gestation. From November 2018, as part of the golden hour stabilisation for babies born < 30 weeks, if certain safety criteria were met during resuscitation, parents were offered a short 5-10 minute delivery room cuddle while covered in plastic bag and on respiratory support supervised by a consultant neonatologist. Initially this was started by few consultants and nurses to assess feasibility. After a few cases a 'Standard Operating procedure' document was written and approved via appropriate Trust governance pathway. This document outlines how to perform this procedure including safety criteria.
Describe the role of Multi disciplinary team involvement in your QIP NSQI 2/5 – Team working & communication	All our consultants, trainees, neonatal nurses attending deliveries are aware of this initiative, familiar with the SOP and cuddles are seen as part of the golden hour stabilisation. Our maternity team (obstetric consultants, midwives) had a great buy in into this project and really have seen the value of helping families to bond. At Imperial over 8 months period it has become standards practice to offer delivery room cuddles if safety criteria are met.
What QI techniques did you use – what worked and what didn't? NSQI 15 – QI structure & resources	• Used process mapping to explore golden hour stabilisation process for babies < 30 weeks gestation and how a cuddle technically can be safely executed and what steps are required? • We collected data on safety outcomes (admission temperature, accidental extubation, admission after 1 hour) • We collected qualitative feedback from parents about cuddles
How did you embed this in education and training NSQI 17/18 – Education & Training	The 'Standard operating procedure for delivery room cuddles for babies requiring admission to Imperial Neonatal Units' is part of the neonatal guidelines. Trainees are introduced to this initiative during their induction. We observed a culture shift and both medical and nursing team become enthusiastic about cuddles and were proud if they were able to give this experience to families.
What Parental/Family Involvement did you have? NSQI 6-10 – Parental partnership in care	We asked parents who had delivery cuddles to provide feedback of their experience, and what those bonding minutes meant to them. We also asked them to share photos we can use to highlight this practice in publications, social media with appropriate Trust consent form.
What was the outcome of your QI project?	• Delivery room cuddles in babies born < 30 weeks gestation are feasible and can be safely included into the golden hour stabilisation process, based on our experiences in a tertiary perinatal centre. • Between Oct 2018 and Aug 2019, 31 families (GA<30 weeks) experienced delivery room cuddles after stabilisation at Queen Charlotte's and Chelsea Hospital. • Gestation age ranged from 23⁺⁰ to 30⁺⁶ weeks • Birth weight ranged from 470 g to 2044 g. • No accidental extubation or respiratory complications were noted. • 22/31 (71%) babies' admission temperature was in the range 36.5-37.5 °C. Only 1/31 (3%) baby had a temperature <36.0 °C. Temperature varied between 35.9 °C and 38.2 °C. • 28/31 (90%) baby was admitted to the neonatal unit within the first hour of life.

- 17/31 babies (55%) received maternal colostrum within 24 hours.
- We received positive feedback from both parents and staff.
- We are planning to collect more structured and detailed feedback from parents, but this is an example of parental feedback on delivery room cuddle:

“Our little baby Constance was born at 29 weeks gestation after my waters broke following a complicated twin pregnancy. We were lucky enough to be allowed skin-to-skin in theatre directly after our C-section. This initiated an otherwise more difficult bond between the baby and I, since I wasn’t physically able to visit her in NICU until the following day. We had 5 minutes of precious skin to skin – I got to connect with her despite the ventilator and wires and cradle her into my chest – a natural feeling for a mother and a memory that I will always cherish. I am sure it also helped my body to more quickly tune in to what had just happened – my colostrum began to do its stuff and enabled me to hand express enough to support Constance in NICU from the outset.”



What 3 points of advice would you give others about to embark upon QI work in their unit?

1. You can implement an initiative to improve patient/parent experience which is not part of the standard practice if it delivered safely
2. Get your team enthusiastic, motivated about the change, this is key to keep the momentum going
3. Parental feedback is very powerful which should be shared with neonatal staff and is key to embed initiatives around family integrated care.