

BAPM Webinar - Optimising Early Maternal Breast Milk for Preterm Infants

7 December 2020 2:00pm to 3:30pm



Imperial College Healthcare 
NHS Trust

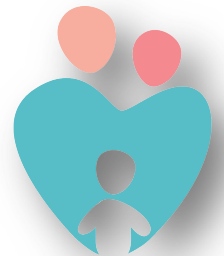


The role of Family Integrated Care in MEBM optimisation



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On behalf of the IFDC core group
Imperial College Healthcare NHS Trust





**Integrated
Family Delivered
Neonatal Care**

Expert in your baby's care

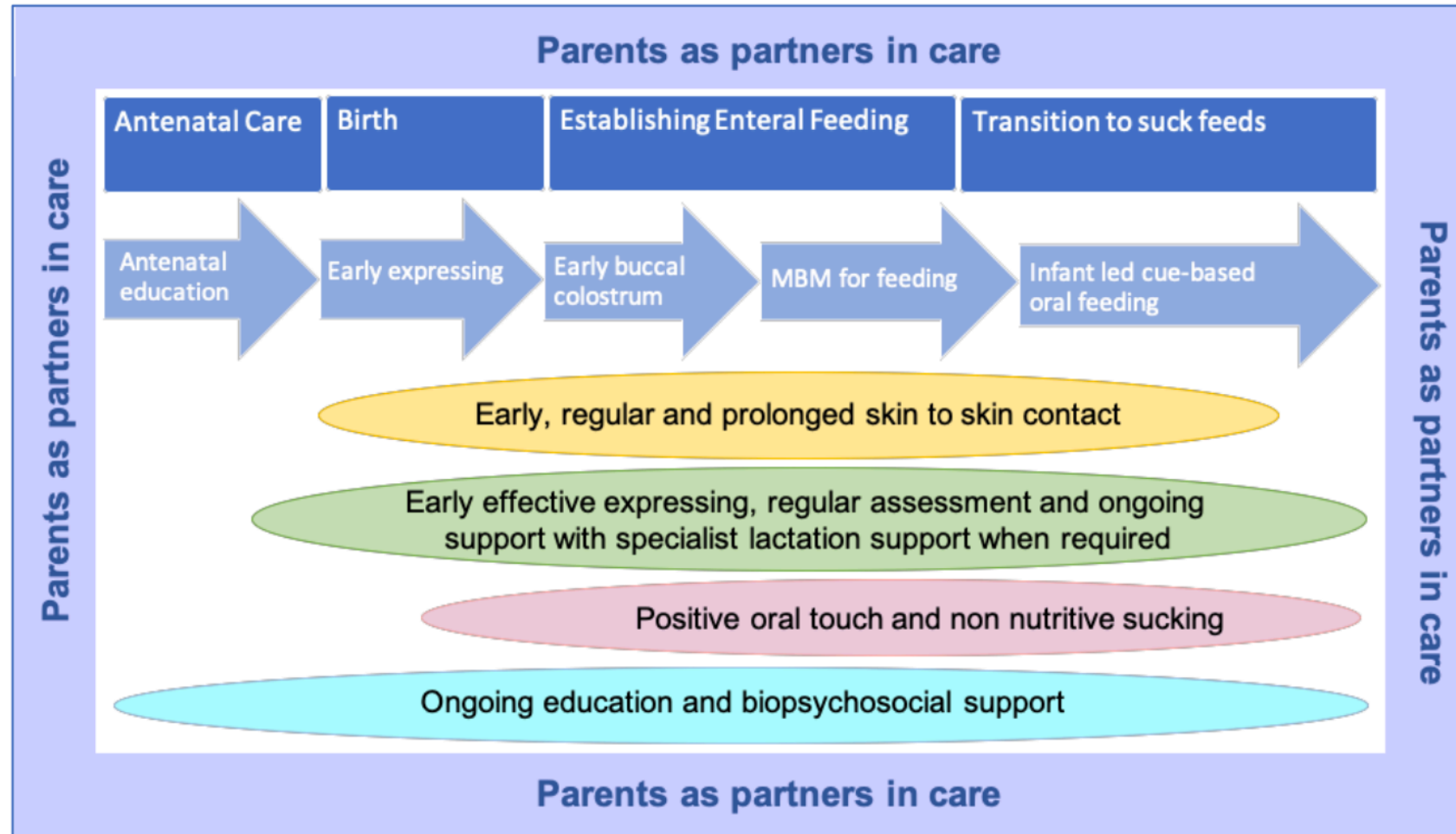
Educate Engage Empower Enable

Perinatal Core Elements and Family Integrated Care (FIC)

Perinatal core elements that support the optimisation of early MBM

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- | | |
|----------|--|
| 1 | Parents as equal partners in their baby's care: Parents are empowered to take part in all elements of their baby's care, facilitating strong close and loving attachments |
| 2 | Antenatal education: Educating families about the value of MBM in prematurity, importance and process of early expressing |
| 3 | Initiation of expressing soon after birth (aim within 2 hours): With easy access to support, training and equipment |
| 4 | Early Colostrum (ideally within 6 hours of birth and always within 24 hours): MBM to be the first enteral feed given to baby, wherever possible |
| 5 | Early and regular parental physical contact with their baby: Delivery room contact, skin-to-skin early and often |
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Overview of the MEBM journey for preterm babies and their families

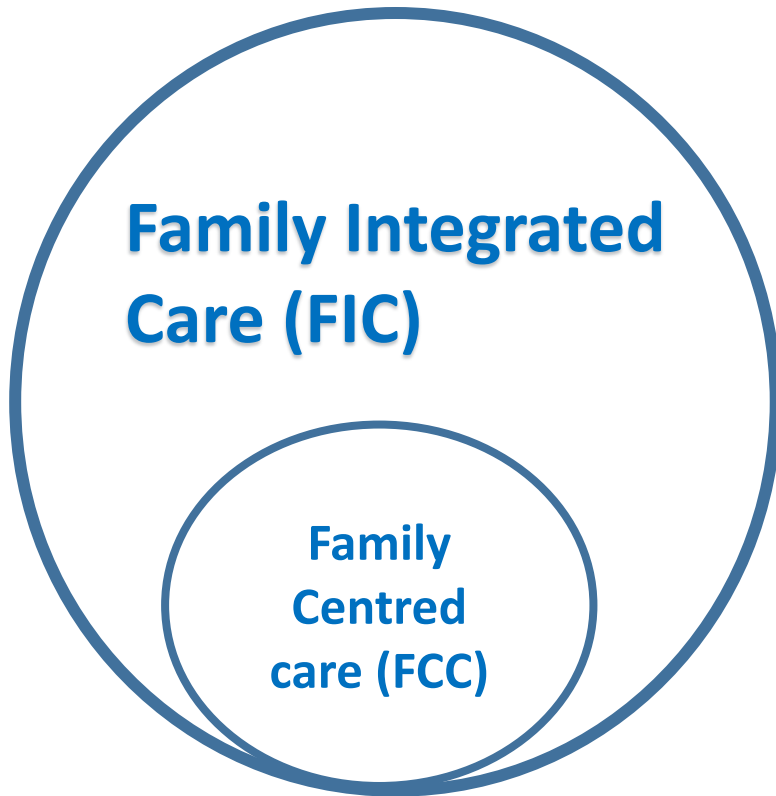


Family Integrated Care (FIC)

DEFINITION:

- FICare is a model of holistic care delivery
- enables and empowers parents, supporting them to become confident, knowledgeable and independent primary caregivers
- parents are actively integrated as equal partners into the neonatal care team.
- ‘primary caregiver’: the majority of the care tasks of the baby (except invasive procedures, intravenous medications) are completed by the parents/ carer who has received adequate training and coaching
- BAPM Framework for practice under development

Family Centred Care and Family Integrated Care



“One step further”

Family centred care and family Integrated Care

Table 1

Basic differences between family centred and family integrated care.

| | Family-Centred Care | Family-Integrated care |
|--------------------------|---|---|
| Staff Education | Staff training offered around Family-centred care in medical and nursing schools, NHS and charities. | Structured training empowers health professionals to be coaches, mentors and counsellors for parents. Clear training syllabus for staff. |
| Parent Education | Information offered by the neonatal unit staff and self-identified by parents. Inconsistent and varied. | Formal training delivered by NNU staff/veteran parents. Clear training curriculum and competency assessment for parents |
| Parent visiting policy | Encouraged to be present on the unit as much as possible. Facilities in place to support this (kitchen, family room, accommodation) | Encouraged to be present on the unit for at least 6–8 h per day and assume most of the primary care of their baby. Facilities in place to support this (kitchen, family room, accommodation for every parent) |
| Routine Cares | Parents are encouraged to be involved in routine daily cares for their baby (feeding and changing). | Parents are encouraged to be involved in daily and enhanced cares for their baby with a level of autonomy following a competency-based training. |
| Medical Rounds | Parents are encouraged to be present for the ward round may be asked questions about their baby | Parents are encouraged to be active members of the ward round and present their baby to the health professionals |
| Administering medication | General understanding of the medication given to their baby. | Identify the purpose of routine medication. Administer approved oral medication under supervision of nursing staff |
| Psychosocial Support | Availability of psychosocial support. | Availability of psychosocial support and peer support from trained veteran parents |

Working together to enable parents as partners in care

We cannot replace the parent's love and care

Parents integrated to the team as equal partners

Parents provide their baby's care as much as possible

Parents present on ward rounds

Parents directing their learning /skill acquisition in structured education program



FIC and breastfeeding

See Toolkit 'Evidence' part:

| Evidence | Reference source |
|--|----------------------------|
| FIC increased any breastfeeding at discharge from 46% to 82% (pilot RCT) | O'Brien 2013 ⁴² |
| FIC increased "high frequency breastfeeding" (≥ 6 times a day) at hospital discharge from 63% to 70% (cluster RCT) | O'Brien 2018 ⁴³ |
| Policies promoting early involvement of parents in feeding support were associated with increased MBM feeding at discharge for moderately preterm babies, with an adjusted odds ratio (OR) of 1.9 (multicentre cohort study) | Mitha 2019 ⁴⁴ |

FIC and breastfeeding

O'Brien 2018

- 26 neonatal units randomized to FIC or standard care
- Primary outcome: infant weight gain 21 days after enrolment
- Secondary outcomes: weight gain velocity, high frequency breastfeeding (≥ 6 times a day) at hospital discharge, parental stress and anxiety at enrolment and day 21, NICU mortality and major neonatal morbidities, safety, and resource use (including duration of oxygen therapy and hospital stay)
- The high-frequency exclusive breastmilk feeding rate (>6 times a day) at discharge was higher for infants in the FICare group (279 [70%] of 396) than those in the standard care group (394 [63%] of 624; $p=0.016$).

FIC and breastfeeding outcomes

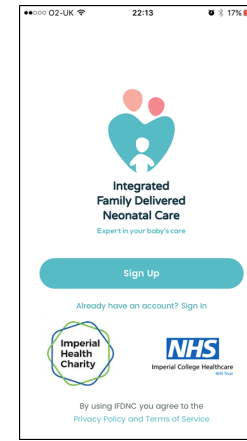
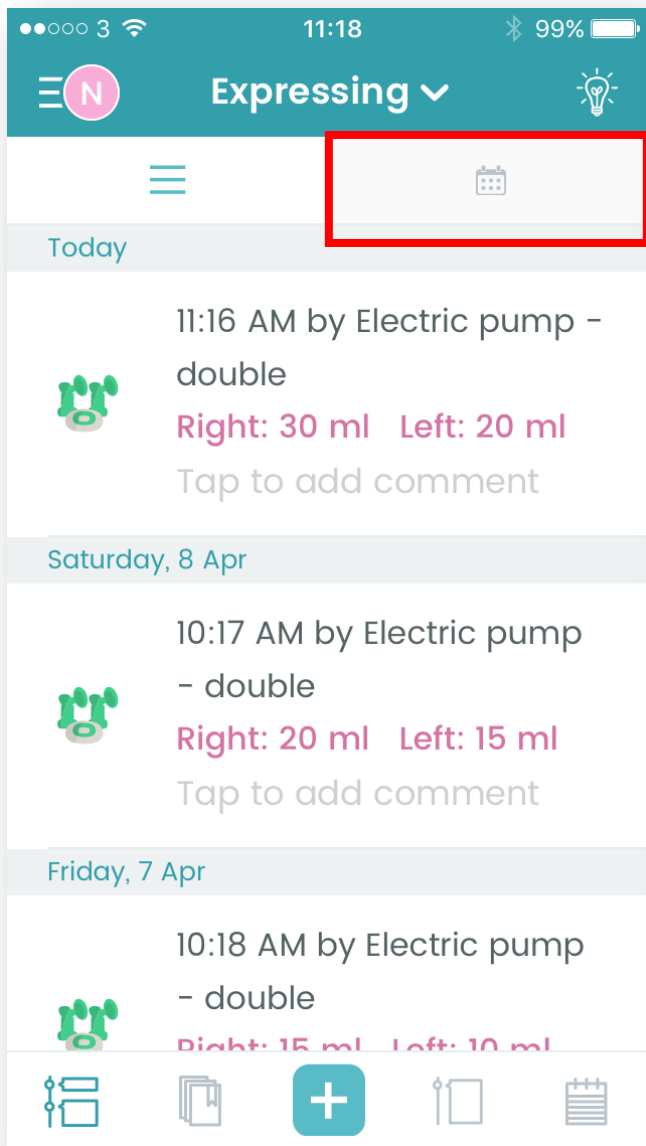
Improving infant outcomes through implementation of a family integrated care bundle including a parent supporting mobile application

Jayanta Banerjee,^{1,2} Annie Aloysius,¹ Karen Mitchell,¹ Ines Silva,¹ Dimitrios Rallis,^{1,3} Sunit V Godambe,¹ Aniko Deierl¹

Outcome data comparison between the IFDC and control groups

| | IFDC (n=37) | Controls (n=57) | <i>p</i> |
|---|--|--|----------|
| ICU stay, days | 3 (0-6) | 2 (0-7) | 0.958 |
| HDU stay, days | 5 (2-11) | 7 (1-24) | 1.000 |
| SCBU stay, days | 30 (21-41) | 40 (31-46) | 0.006 |
| Total length of stay (LOS), days | 41 (32-63) | 55 (41-73) | 0.022 |
| Corrected gestation at discharge | 36 (35 ⁺⁰ -38 ⁺⁰) | 37 ⁺¹ (36 ⁺³ -38 ⁺⁴) | 0.003 |
| Weight gain, g/day | 13 (10-19) | 14 (11-18) | 0.666 |
| Body weight at discharge | 1822 (1685-2182) | 2047 (1782-2342) | 0.085 |
| Full enteral feeds achievement, day | 6 (4-9) | 8 (6-13) | 0.008 |
| Full suck feed achievement, day | 40 (32-52) | 47 (39-71) | 0.022 |
| * Maternal milk at discharge (BF/MEBM/mixed) | 34 (92) | 54 (95) | 0.206 |
| * Exclusive maternal milk at discharge (BF/bottle) | 25 (68) | 31 (54) | 0.282 |
| Exclusive breast feeding at discharge | 17 (46) | 22 (39) | 0.525 |
| Invasive ventilation duration | 0 (0-2) | 0 (0-2) | 0.857 |
| Non-invasive ventilation duration | 4 (2-15) | 7 (1-26) | 0.652 |
| Oxygen duration | 1 (0-16) | 8 (1-47) | 0.041 |
| Discharge on home oxygen | 5 (14) | 5 (9) | 0.530 |
| Intraventricular haemorrhage III-IV | 1 (3) | 2 (4) | 1.000 |
| Retinopathy of prematurity | 6 (16) | 10 (18) | 1.000 |
| Necrotizing enterocolitis | 0 | 2 (4) | 0.518 |
| Late onset sepsis | 4 (11) | 3 (5) | 0.428 |
| Bronchopulmonary dysplasia | 11 (33) | 19 (33) | 1.000 |





IFDC mobile App

'The app is fantastic, especially for tracking expressing and breastfeeding...Everything I'm told by the doctors can go in one place.'

The library is great too, lots of my questions have been answered without relying on Google!

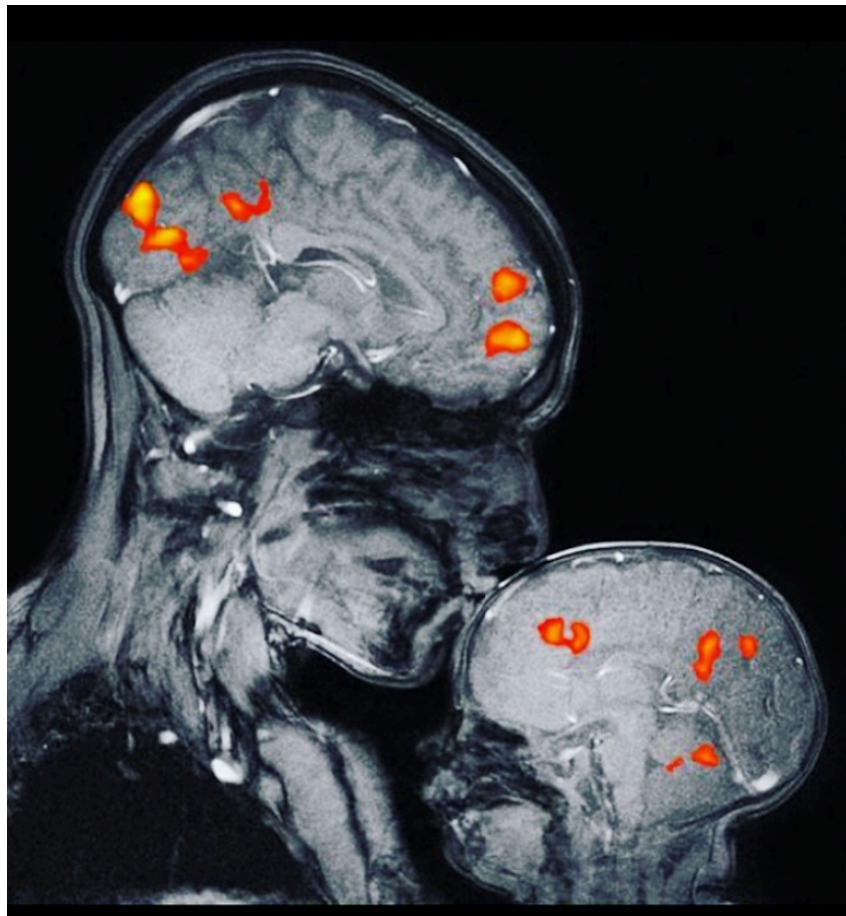
I also note down questions I have so I don't forget to ask them, there are lots of questions you think of at all hours of the day and night and I always have the app with me'

FIC and skin-to-skin

See Toolkit 'Evidence' part:

| Evidence | Reference source |
|---|----------------------------------|
| Volumes expressed immediately after SSC are higher than expressing in a room away from baby (adjusted mean of 118ml/session compared to 87ml/session) (cohort study) | Acuna-Muga 2014 ⁷⁰ |
| The number of times the baby is put to the breast without feeding (licking/nuzzling) is predictive of milk weight in the first 10d (observational data reported as part of RCT) | Fewtrell 2016 ⁷¹ |
| SSC increases exclusive breastfeeding at discharge or 40 to 41w (RR 1.16) and at 1-3mo follow-up (RR 1.20) (Cochrane review) | Conde-Agudelo 2016 ⁷² |
| Policies promoting kangaroo care were associated with increased MBM feeding at discharge for very preterm babies (adjusted OR 2.3) and moderately preterm babies (adjusted OR 2.0) (multicentre cohort study) | Mitha 2019 ^{44,51} |
| 60mins of SSC in the delivery suite increased exclusive breastfeeding at discharge from 69% to 86% (non significant trend; study underpowered). Note, infants had received "less invasive surfactant administration" if appropriate before SSC, had intravenous dextrose running and SSC was performed in a room with ambient temperature of 24°C | Mehler 2019 ⁶⁹ |

FIC and skin-to-skin



- Increasing evidence showing: the first minutes of life are a valuable window for bonding & intervention
- The oxytocin peak in the early sensitive period facilitates maternal behavior and bonding and has anxiolytic and sedating effect
- Maternal -neonate separation resulting 'toxic stress'
- 'Zero separation campaign' (EFCNI)

Functional MRI image showing a mother and a baby's bond
Deen B, Richardson H, Dilks DD, et al. Organization of high-level visual cortex in human infants.
Nat Commun. 2017 Jan 10;8:13995.

First 1000 days –established by first 1000 min

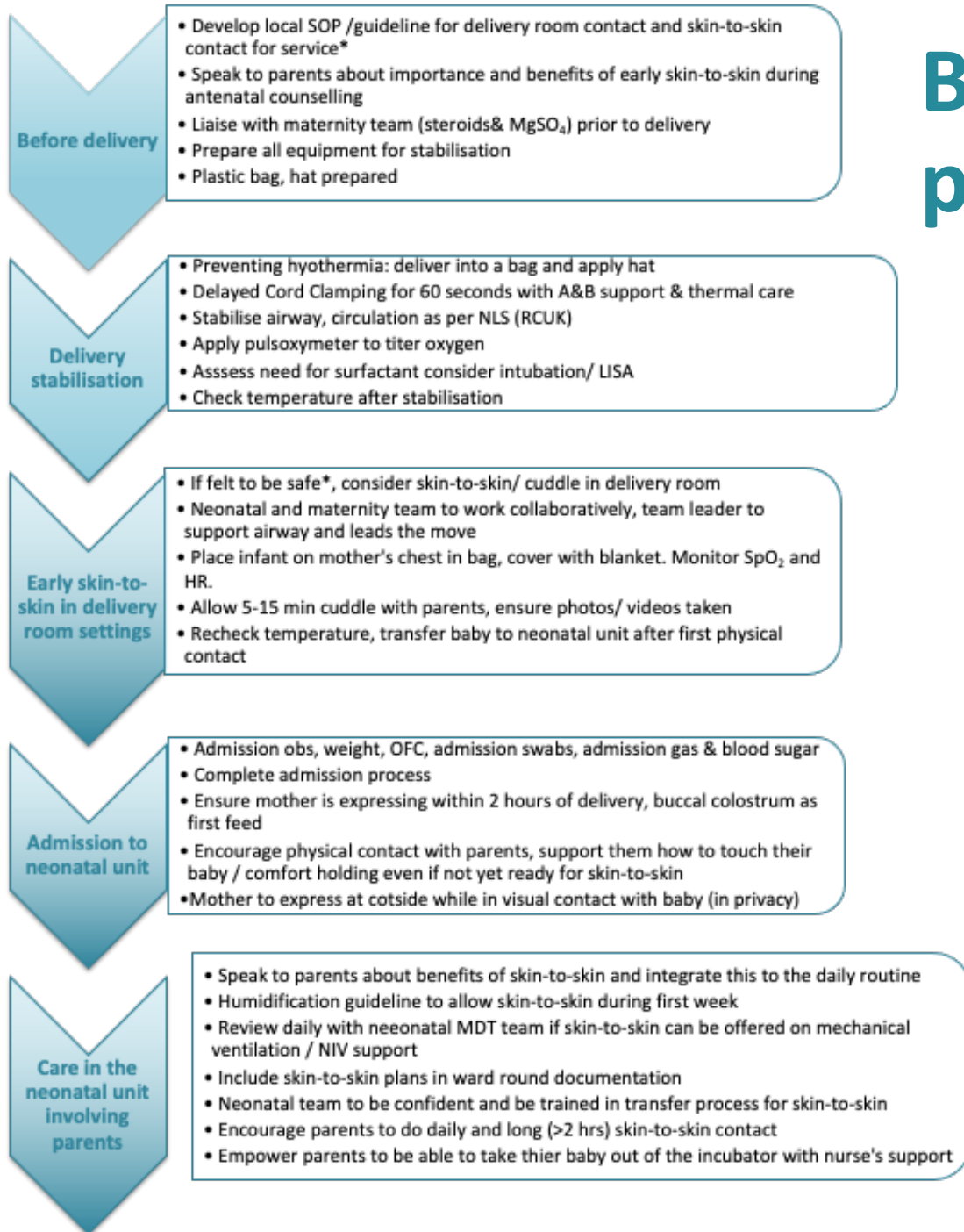
- The 1,000 days between a woman’s pregnancy and her child’s 2nd birthday offer a unique window of opportunity to build healthier and more prosperous futures.
- UNICEF - Nutrition
- First 1000 minutes: 16 hours
- Skin-to-skin contact, first attachment to the breast. These sensory signals wire new pathways/connections that pregnancy hormones have made possible
- “maternal sensitivity” - it is wired into the mother’s brain in the first 1000 minutes.



Skin-to-skin and barriers

- Lack of resources and confidence of staff to safely support skin-to-skin contact
- Lack of awareness of the benefits of skin-to-skin contact
- Parental belief that incubator is the safest place for the baby.

Best practice elements to promote skin-to-skin contact



Examples

- Staff and parent education about benefits
- Unit procedure/SOP for delivery room cuddle or contact
- Unit procedure/ SOP for SSC (transfer, positioning, use of slings/ reclining chairs)
- Kangaroo care friendly unit policies (humidification guideline etc)

Summary

- Family integrated care can help to optimize MEBM availability and can support parents to maximise their success in lactation
- Family integrated care nurtures skin-to-skin contacts
- Building partnership with parents can help bonding, parental mental health and other neonatal outcomes

The parent experience

'Baby H arrived at 26wks, 14 weeks early. She was so tiny, we were so scared. My husband and I didn't have a clue what to expect and what to do, she looked so fragile and had so many tubes and wires attached to her. The first few days were a bit of a haze, the NICU nurses took care of everything. But as the days rolled by they encouraged us to get more involved with her cares, and spoke to us about how we could connect with our baby girl even though she was in an incubator. It was a gentle, hands-on education - something we were scared to do - we always felt it best to leave it to the expert nurses and staff - but they taught us to be the experts in caring for our precious baby with confidence...



Thank you for your attention!

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We are grateful for the support of our veteran parent group, Imperial Health Charity, all parents who participated in the IFDC program, and neonatal nurses, AHPs, doctors to make this possible!