Unanswered Q&A

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1. In a setting where there is no continuous monitoring even for the sickest newborns on CPAP, when is the 'right time' to start iKMC? we do practice intermittent KMC in our NICU where the mothers seat in a small chair for an hour or so.

The new WHO guidelines refer (https://www.who.int/news/item/15-11-2022-who-advises-immediate-skin-to-skin-care-for-survival-of-small-and-preterm-babies)
The guidelines advise that skin to skin contact with a caregiver should start immediately after birth, without any initial period in an incubator. This marks a significant change from earlier guidance and common clinical practice, reflecting the immense health benefits of ensuring caregivers and their preterm babies can stay close, without being separated, after birth.

This may should like a shocking statement, acknowledged by "significant change", it is a paradigm shift. So my answer is that where there is no continuous monitoring available, the sickest newborns will be much safer in skin-to-skin contact (SSC) than in an incubator. Observation and experience from the iKMC study are that mothers and other family members can identify and help with instable babies.

For "the sickest newborns on CPAP" this requires a new skill set to combine SSC with CPAP; and all other technology for that matter.
Note also it is skin-to-skin contact that we are starting immediately and giving continuously. KMC is a strategy that includes support for breastfeeding which means expression of colostrum in the first hour and two hourly after that, and so on.

2. How it can be explained that the iKMC practices for those mothers who delivered via C/S?

In the iKMC study, the improvement in mortality seems directly linked to zero separation, since colostrum and breast milk and all other care was carefully controlled to be the same in both groups. Mothers and another family member provided SSC, and in C/S surrogates were often used to ensure early skin-to-skin contact. One possible mechanism is colonization by the family microbiota, which has been shown to be protective against Hospital Acquired Infection and, sepsis and NEC. Decreased sepsis was the primary secondary outcome. Another mechanism maybe dopamine and oxytocin co-regulation, that lowers cortisol and stress hormones and improves resilience (stress resistance).

3. Is Kangaroo Mother Care advanced care? Should it be in the advanced care package?
I might say that Kangaroo Mother Care is already in the advanced care package … we already do some skin-to-skin contact, we already ensure nutritional needs, ongoing care for problems and discharge with follow-up. My provocative answer: skin-to-skin contact is not a kind of care, it is place, a place where care is provided, including advanced care. And latest science and evidence (see WHO quote

above) is that this is the safe place where the brain achieves resilience, where feeding with colostrum works together with microbiota. For these to work, SSC should start immediately and be continuous. Your question: only if we do zero separation will our care become advanced. And by "advanced "I do not mean how scientific and technological but how much better outcomes it produces.

4. Congratulations to the panelists for the important concepts expressed. Reference was made to the importance of working with anesthesiologists, they could briefly comment on the strategies used with these professionals.
   The anesthesiologist is actually far more important for the mother than the obstetrician. Several parallel strategies can be forwarded. There are anecdotal reports of enhanced physiological stability in the mother when SSC is done on the table, a parallel strategy can even be to invite novel research into this. Information should be provided beforehand about having a partner present in the operating room, both for neuro-emotional support and for backup to do skin-to-skin contact. The anesthesiologist should then be the one to work out and suggest how this is best arranged in terms of left or right, and planning ahead of time to enable space while ensuring access to technology.

5. In my line of work the word visit still exists and for this reason only 1 hour twice a day is allowed. Personally, as I do KMC, I try to ensure that the parents stay longer than the established time, however, sometimes parents, due to their personal circumstances, arrive later than the established time, where only 20 or 30 minutes remain. Can you consider doing the KMC?
   The Who policy guideline does identify your situation and line of work as "earlier guidance and common clinical practice", and strongly recommends this be changed. This applies from the first hour of birth and onwards, and encompasses both skin-to-skin contact and colostrum expression and provision, along with monitoring and all essential newborn care, or advanced care packages. The guideline statement was presented 15-11-2022, but full policy statement and implementation strategy documents are soon forthcoming.
   In the meantime, it is documented that benefit from skin-to-skin contact requires at least an hour, which neurologically allows for one complete sleep cycle.
   Your question: well done for pushing the boundaries. What is also needed is the education and information to parents about the needs of their infants. Our experience is that when parents really know what "the best interests of the child" are they will prioritize their personal circumstances differently. Health services also need to be more broadminded about solutions, for example welcoming other family members. Parents and all family members each need induction to the unit, specially with respect to all aspects of hygiene.

6. Which variables would you consider as a key to success for iKMC?
   The key variables that reduced mortality in the iKMC study were "Immediate" and "continuous" skin-to-skin contact (SSC). The key input necessary to achieve immediate and continuous was lowly paid,

fulltime employed staff dedicated only to the intervention (KMC supporters). This requires being at the birth, or at least present with a few minutes to start SSC. They had special training with the KMC garment that ensured safe technique and safe transporting, and such safe technique required ongoing supervision. Even if SSC is delayed for many reasons, colostrum should be collected after 30 minutes (at latest before 60 minutes). 2 hourly ongoing breastmilk expression and administering to baby is an ongoing task, and the mother may be far from the infant. A dedicated person is necessary to ensure this is ALWAYS done ON TIME. Continuous SSC requires ongoing coordination with other caregivers (surrogates). The KMC supporters provided education and supervised hygiene practices, among other support tasks.

7. Are there any contraindications for iKMC? And for what GA do you recommend it? is there any research or data about the safety of IKMC in extremely premature baby?

I suggest we turn your question around slightly:
We now know that maternal infant separation at birth is a severe stressor with potential immediate harm and harm that can present across the lifespan, so are there situations where it is actually necessary to separate baby from mother?

And asked this way, the answer is YES, many such situations can arise. In the past we totally ignored the risk of separation, our new knowledge requires to re-prioritize. We have to weigh benefit and risk, and we need also to acknowledge the risk of separation, and the total absence of benefit. A baby with gastroschisis or meningomyelocele may have more risk from SSC than benefit. Incompetent or inadequately trained staff unable to combine necessary technology with SSC can be a contra-indication, (and an urgent need to correct). This list can be long!
Toxic stress comes from prolonged stress, so short episodes of separation for procedures and Xrays and the like followed by restoration of buffering protection of caregiver does not lead to harm. If in addition procedures are done with parents holding or present by smell and sound the possibility for harm is even less. Having said which, if such procedures are inadequately buffered and too frequent (such as 30 or more heelpricks in a day), epigenetic adaptation to stress and pain will be initiated.

Gestational age is a factor, research has for ethical reasons only been allowed at above 1000g and above 28 weeks, WHO recommendations apply fully for these based on good quality evidence. Below these boundaries more risks and issues come into play. For infants above 26 weeks and regardless of weight, small research studies and reports suggest that it is safe, both in high and low income countries. Below 26 weeks the early hours and days have greatly more demands and complexity. In such cases skin-to-skin contact must be delayed. However, zero separation can be maintained with ongoing parental presence, where olfactory and auditory sensations with hand holding can compensate for SSC.