

Healthcare providers' perceptions of barriers and enablers to the practice of Kangaroo Care in Neonatal Intensive Care Units in British Columbia

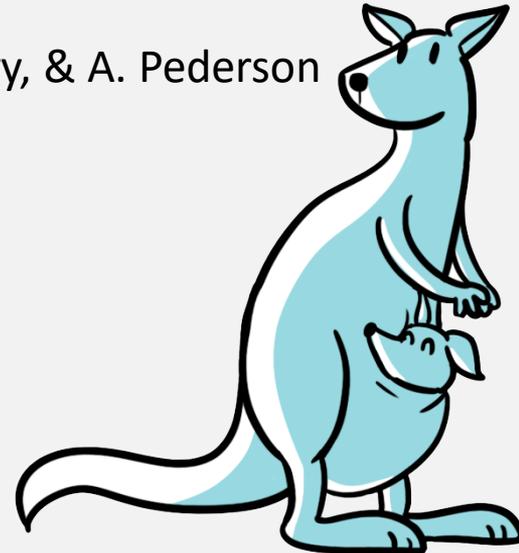
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Kangaroo Care Concurrent Session D2
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WOMEN'S HEALTH
RESEARCH INSTITUTE
AT BC WOMEN'S



THE UNIVERSITY
OF BRITISH COLUMBIA



Preterm birth in BC

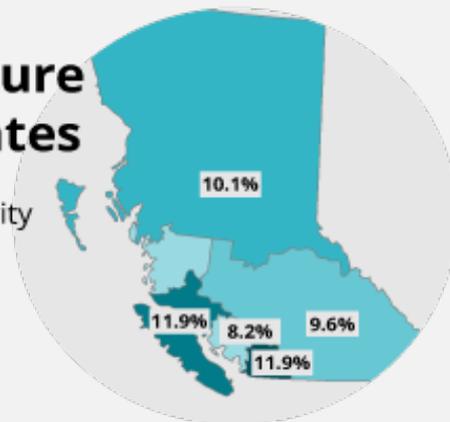


45,000 are born in BC

11% are preterm births

1/5 of those require resuscitation

Premature birth rates
differ by health authority



- Vancouver Coastal - 8.2%
- Interior Health - 9.6%
- Northern Health - 10.1%
- Island Health - 11.8%
- Fraser Health - 11.8%
- PHSA - 12.1%

9.5 days

is the average NICU stay

85%

of preterm births are late preterm: 34-37 weeks

587 million

is the estimated Canadian economic burden of premature birth



1/3 of infant deaths are a result of a premature birth

CHILDREN BORN PRETERM HAVE A HIGHER LIKELIHOOD OF:

Requiring specialized supports^{7,8}:



Intensive
healthcare



Psychological
supports



Special
education



Developmental
services

Neurodevelopmental disabilities^{9,10}:



Hearing
loss



Vision
impairment



Intellectual
disability



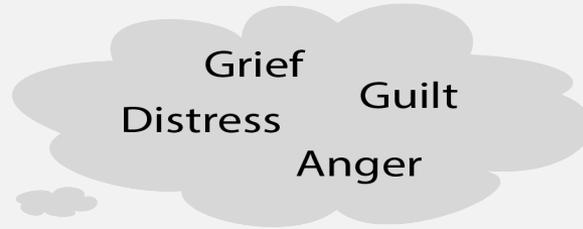
Movement
disability



Behavioural
issues

PARENTS OF PRETERM INFANTS:

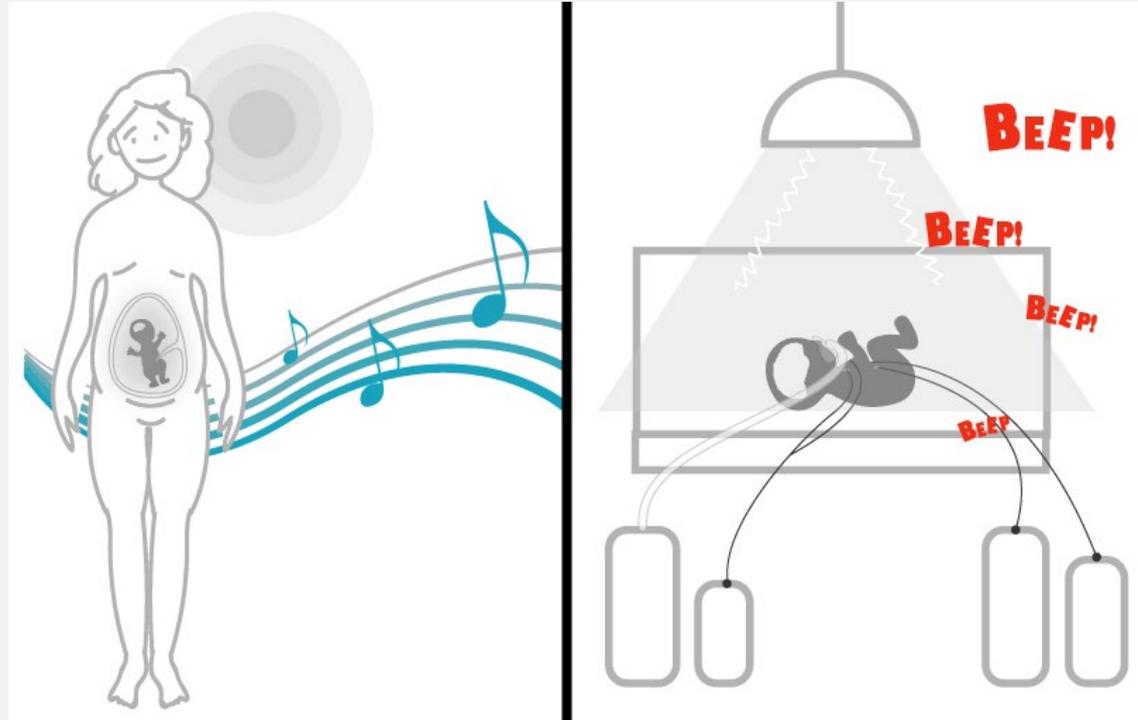
Can develop feelings of⁵:



Have an increased risk of^{2,6}:

- Post-traumatic stress disorder
- Depression and anxiety

Mother's womb vs the NICU



"Baby's do not know stillness."

Early life experiences: Preterm birth and admission to the NICU



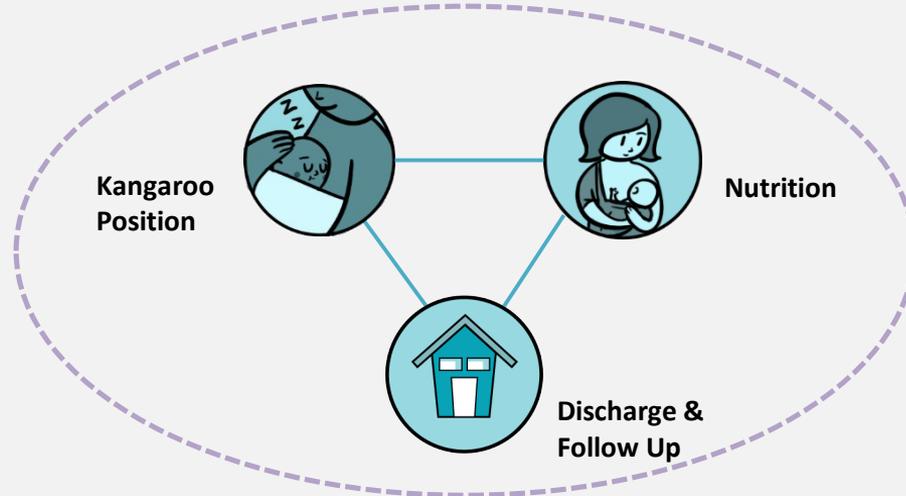
- Parental separation and interaction
 - Repeated painful procedures
 - Environmental stimulation
- 
- Caregiving experience
 - Sleep deprivation

3 Components of Kangaroo Care

Kangaroo Care is the holding of an infant (wearing only a diaper) in an upright and prone position skin-to-skin against a parent's bare chest (chest-to-chest). A wrap or blanket is often used to keep the baby secure and warm.

(Adapted from World Health Organization, 2003)

Supportive environment



Supportive environment

How does it work?



Kangaroo Care is thought to stimulate the C-afferent nerves on both the infant's and mother's chest surfaces.

These nerves are most dense in the newborn period and are present on the chest (umbilicus to sternum) and back of the infant.

These nerves are only stimulated by constant pleasing human touch.

Phasic touch, such as patting or massage, does not stimulate the C-afferent nerves.

The positive touch stimulates the nerves to send a message directly to the brain. In response, the brain stimulates the release of oxytocin.

This switches the brain stem from sympathetic (stress, flight, fear) to parasympathetic (calm, contented, relaxed) dominance.

Improved Outcomes



Physiological processes

- Decreased response to stress and pain
- Improved autonomic functioning



Cognitive development

- Improved executive functioning
- Intelligence



Parental mental health

- Decreased depression and anxiety
- More positive parent-infant interactions



Behavioural control

- Improved attention
- Increased productivity
- Lower school drop-out
- Reduced aggression and hyperactivity



Improved sleep organization

- Improved sleep-wake cycles
- Longer quiet sleep



Improved breastfeeding success

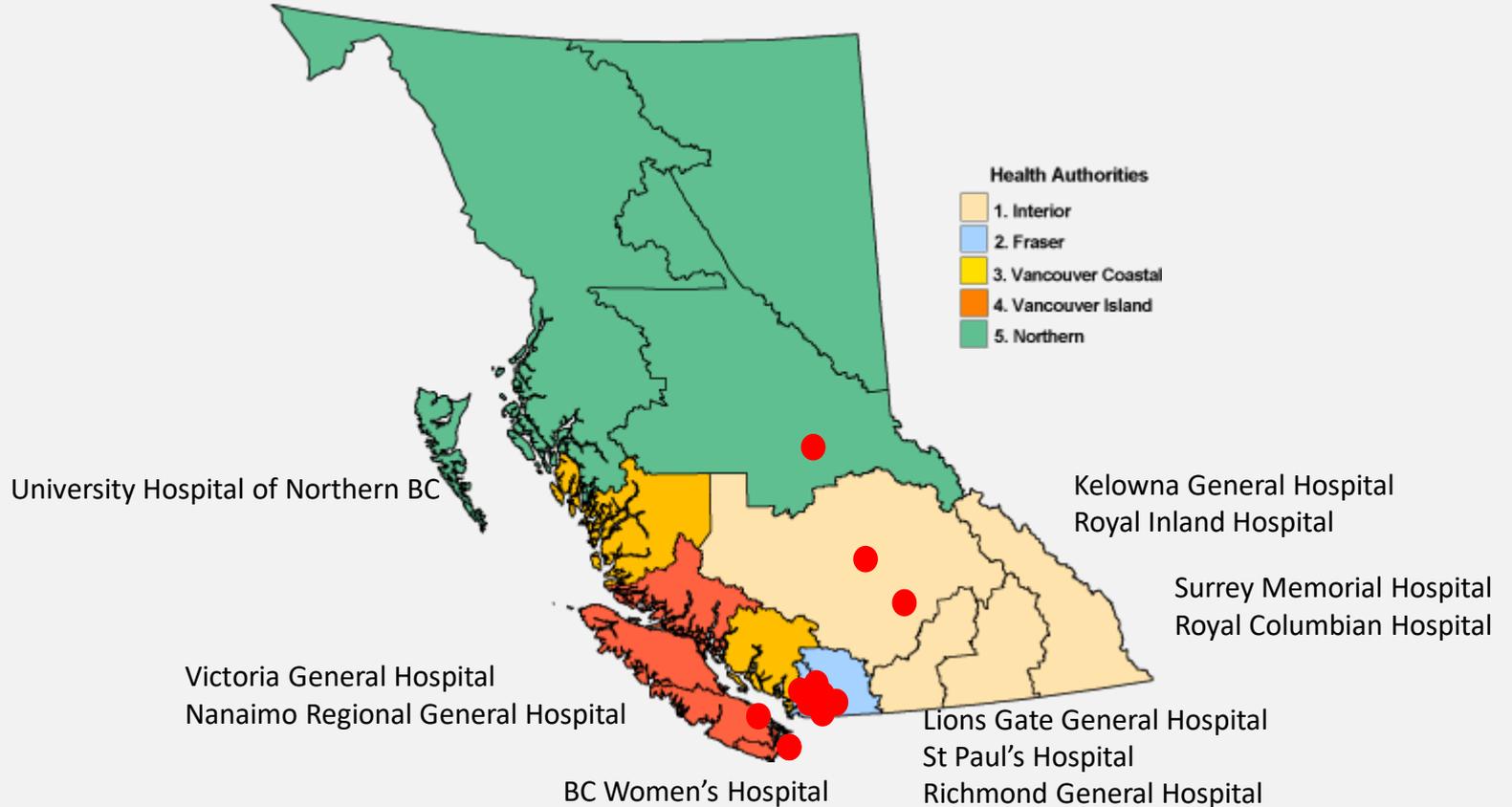
- Positive impact on breastfeeding initiation and duration rates
- Improved milk production

Project Rationale

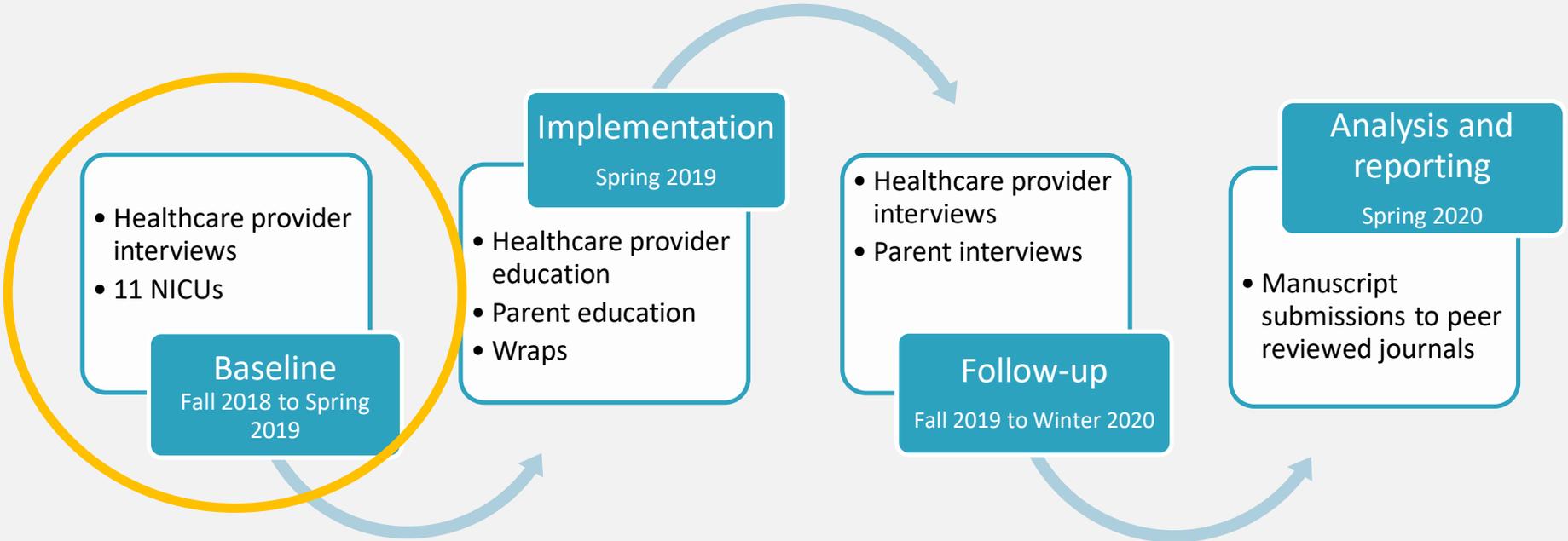


- This study aims to understand:
 - The current state of Kangaroo Care in BC's NICU
 - The barriers and enablers to Kangaroo Care implementation

Provincial Initiative



Timeline of research project





Methods

- Semi-structured interviews
- n=34
- Interviews were recorded, transcribed, coded, and analysed
- Field notes
- Observations

Health Authority	Hospital	Pre-implementation Interviews
Northern Health	University Hospital of Northern British Columbia	2
Fraser Health	Surrey Memorial Hospital	6
	Royal Columbian Hospital	1
Vancouver Island Health	Victoria General Hospital	1
	Nanaimo Regional Hospital	2
Vancouver Coastal Health	St Paul's Hospital	1
	Lions Gate Hospital	1
	Richmond General Hospital	1
Provincial Health Services	BC Women's Hospital	10
Interior Health	Royal Inland Hospital	4
	Kelowna General Hospital	5

Profession of participants	Number of interviews
Registered Nurse	10 (30%)
Nurse Educator	7 (20%)
Neonatologist	2 (5%)
Program Coordinator	1 (3%)
NICU Manager/Director	5 (15%)
Midwife	1 (3%)
Lactation Consultant	1 (3%)
Physiotherapist	1 (3%)
Respiratory Therapist	1 (3%)
Occupational Therapist	3 (9%)
Nutritionist/Dietician	1 (3%)
Patient Care Coordinator	1 (3%)

Results



- Healthcare providers' reported perceived barriers and enablers to Kangaroo Care in the NICU
- There is variation in how infants receive Kangaroo Care depending on when, where, and by whom they are cared for
- The extent to which these barriers and enablers influence the practice is highly dependent on the context of each NICU
- The barriers and enablers are organized into the following four themes



1. NICU physical environment

“I guess some of our other chairs had broken, and we didn’t have enough chairs for all of the parents to sit, so we had to run up to maternity and bring stuff down. Like it was embarrassing.” (Nurse Educator)

“...Just when the NICU is full, I think that sometimes with all of the juggling of trying to get around each of the kind of little spaces with lots of parents that are there, and they want to have a little bit of privacy as well.” (Occupational Therapist)

“It is huge, and especially when we are one of the level three—like it makes me so sad that if you come down from wherever, and the only place to come is here, you are stuck here for six months and you are paying out of pocket.” (Nurse Educator)



2. Healthcare providers' beliefs about Kangaroo Care

“There again, the issue comes up over parent’s understanding of how important it is, and why they need to reorganise their life around it. And their ability to speak all their problems and take help.” (Director)

“Well, we do Kangaroo Care, but I don’t know that it’s like officially Kangaroo Care. We encourage skin-to-skin.” (Program Coordinator)

“Yeah, but that’s a barrier. So if you’re looking at medium to long-term outcomes, so we’re relying on bedside nurses to frontline this and communicate a lot of this. But honestly, I’m not sure that’s on their radar that much at all, medium to long-term outcomes, and what they are doing affects the medium to long-term outcome, you know what I mean?” (Medical Lead)



3. Clinical Practice Variation

“Yeah, because if God forbid you take that kid out to do something that’s theoretically great and then you break the baby.” (Physiotherapist)

“If you can work on a model where parent’s are more in charge of the care of their baby, then you reduce the workload on the staff. But as long as the staff are the gatekeeper to all of that, it’s going to feel like a lot of work for them.” (NICU Manager)

“We’ve failed this mom that she has to be the one to ask us. And how is it that we haven’t offered it to her in these seven days.” (Clinical Associate)

“We’ve done the policy and education so at some point we have to say that this is important enough that people are held accountable if they’re not following hospital policy.” (Lactation Consultant)



4. Parental Presence

“Yeah you talk about, ‘Oh yeah skin to skin, oh you’re going to do it for the feed. That’s great’. I think it ends there.” (Registered Nurse)

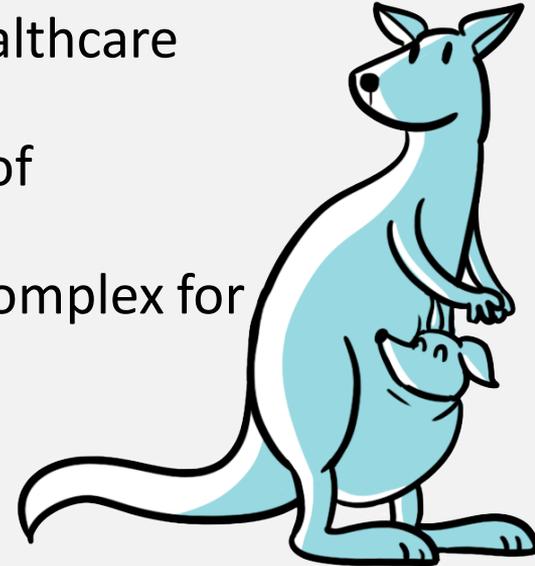
“But more what messaging has this mother received that she’s not here. You know that she hasn’t received the support to understand that her presence is invaluable to her baby.” (Lactation Consultant)

“The second thing is because right now we still have 2 hours closed our nursery. Yeah because shift change and then our colleague is still concerning about confidentiality issue.” (Registered Nurse)

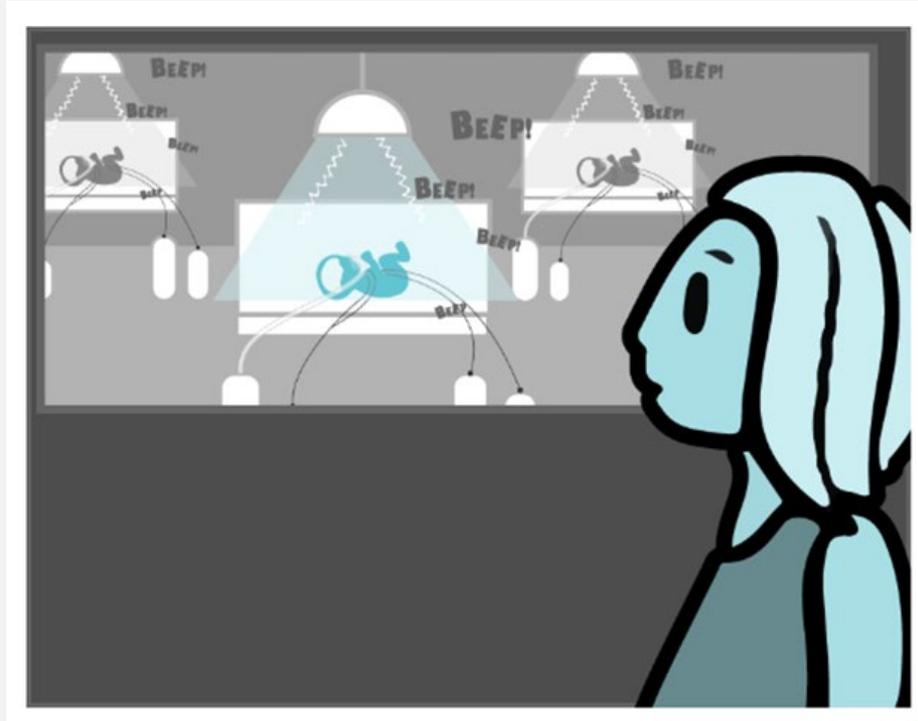
“If they don’t have extended family that are able to help provide care then that often really limits the amount of time that they’re able to spend with babe.” (Registered Nurse)

Conclusions

- The practice of Kangaroo Care in BC is highly variable between healthcare providers and sites
- The long-term health and wellness outcomes of Kangaroo Care are not well understood by healthcare providers
- Infant stability directly impacts the comfort of healthcare providers to implement Kangaroo Care
- Champions and leadership are important drivers of Kangaroo Care initiation
- Supporting families to be present in the NICU is complex for bedside nurses

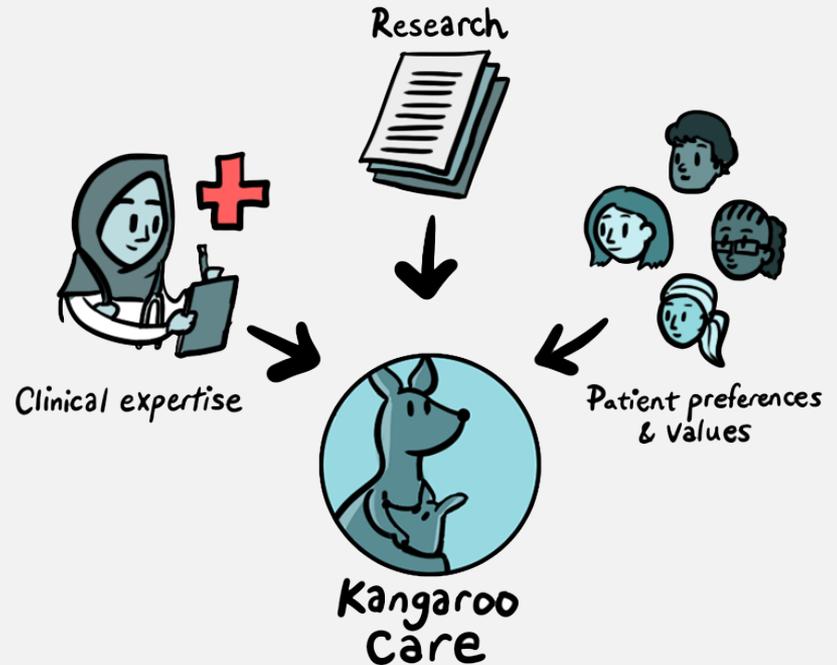


Paradigm shift in neonatal care



How can we support Kangaroo Care going forward?

- Clinical documents
- Support for healthcare provider practice change
- Knowledge translation
- Universal family-centered care principles





What's next?

- UBC Continuing Professional Development Course
 - Strengthening Kangaroo Care for Preterm Infants in BC
 - 4 modules:
 - The introduction to Kangaroo Care
 - The evidence for Kangaroo Care
 - How to safely practice Kangaroo Care
 - Strengthening Kangaroo Care in NICUs

Thank you



Implementation activities

- In-person education
- Wrap distribution
- Parent education; hand outs and videos
- Resources and videos



Kangaroo Care: Information for Parents



Kangaroo Care
INFORMATION FOR PARENTS

Draft, February 2019

Provincial Health Services Authority
Better people. Better health.

Perinatal Services BC
In partnership with Services Authority

Sup (or transfer) your baby, talk to your nurse. Being well will be more comfortable.

When your Kangaroo Care is over, depending on your baby's condition, you may be able to leave the incubator door open to get your baby as soon as possible.

When you are ready to get your baby out of the incubator, you will be more comfortable.

- Lower your chest to your baby and lift your baby in one movement to your chest. Support your baby's body and head as you stand up.
- A healthcare team member or support person can adjust the lines and tubes as needed. Pull the wrap over your baby's body to the top of their shoulder/bottom of the ear lobes. Pause to see that all team members and equipment are in a safe position and sit down slowly in the chair.
- Secure tubes and lines to the wrap or gown. Check the positioning of your baby and the wrap. It may take your baby time to go back to their normal vital signs. You can support your baby's move into Kangaroo Care by being patient and remaining calm.
- Get comfortable and enjoy this time with your baby.



For how long should I do Kangaroo Care?

Hold your baby in Kangaroo Care as soon as possible after birth for as long as possible. More time is better, up to 24 hours a day. This will help your baby have a deeper and more restful sleep. When your baby is held for more than a full sleep cycle (about 60 minutes) they are able to experience the benefits of Kangaroo Care.

How do I use the Kangaroo Care wrap?

Talk to your nurse about choosing a type of wrap and size that fits best. The wrap should be snug to hold the baby tightly to your chest and be comfortable to breathe.

Note: Follow the manufacturer's instructions for information on safe positioning and ways to tie the wrap.

If it isn't a good time for Kangaroo Care, what can I do?

When your baby cannot be held in Kangaroo Care you can still provide loving touches that are helpful for both you and your baby.



Hand hugging

Hand hugging or facilitated tucking is when you place one hand above their head and your other hand cups their feet and provides light pressure. This makes your baby feel contained and safe. You can do this any time to calm your baby. It is very helpful to hand hug during procedures like blood work.

Sing, read, talk

It is important for your baby to hear your voice. Sing, read, or simply talk to your baby. Singing helps to calm babies and both reading and talking promote bonding and long-term language development.



Kangaroo Care safer positioning checklist

- Sit in a semi-reclined position, not flat
- Baby is in an upright chest-to-chest position
- Baby's face is not covered by the wrap
- Baby's neck is straight
- Baby's legs and arms are flexed, in a frog-like position

Safe sleep in the hospital while in Kangaroo Care

It is normal for you to become sleepy or want to rest during Kangaroo Care. If you feel yourself falling asleep, recline in a chair (do not lay flat), keep your baby secure in the wrap and in a safe position while on a monitor. Let your baby's nurse know you might fall asleep.



If your baby moves to another hospital

Your baby may be moved to another hospital. Here are some suggestions to help you and your baby adjust.

- Let your baby's healthcare team know how much Kangaroo Care you are doing.
- Discuss how you can be involved in your baby's care so you will feel confident when it is time for your baby to go home.
- Be your baby's advocate. If the healthcare team does not offer Kangaroo Care, ask for help to do it.

Should I continue Kangaroo Care once I leave the hospital?

Yes, practice Kangaroo Care at home. You and your baby will still enjoy being close at home. Your baby will let you know when they no longer like to be held in Kangaroo Care. Create a safer sleep plan that works for your family and respects your cultural traditions at <https://open.ub.ca/hc/>

Or scan here with your smart phone



Safe transfers – building confidence



Healthcare provider: Key Messages

Kangaroo Care Key Messages for Healthcare Providers

What is Kangaroo Care?

Kangaroo Care is the skin-to-skin holding of a baby (wearing only a diaper) against a parent's bare chest, secured with a wrap.



Guiding Principles for Kangaroo Care

- 1 Create an environment that supports both physical and emotional closeness between the preterm infant and parent immediately after birth and during the infant's stay in the hospital
- 2 Support parents as primary caregivers and as vital members of the healthcare team
- 3 Support Kangaroo Care as the standard place of care that is essential for all newborns
- 4 Initiate Kangaroo Care as early as possible after birth and for as long as possible

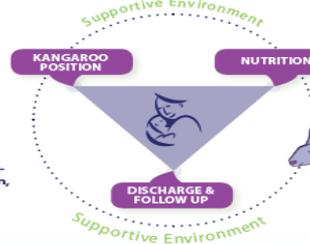
Kangaroo Care is Made of 3 Important Parts:

KANGAROO POSITION

Skin-to-skin contact between a parent and infant in an upright position

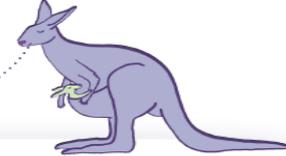
DISCHARGE & FOLLOW UP

Care and support of the infant-parent dyad without separation, ensuring physical and mental well-being, with timely discharge home and appropriate follow-up.



NUTRITION

Breastfeeding and human milk production are supported by Kangaroo Care. Kangaroo Care is good for all infants regardless of infant feeding choice.



The Importance of Kangaroo Care for the Infant and Family

There are many ways that Kangaroo Care improves immediate and long-term outcomes for infants and families.

For Infants

- Stabilises heart and breathing rate
- Maintains temperature
- Reduces infection by colonising with family bacteria versus hospital bacteria
- Improves quality and duration of sleep
- Improves neurodevelopment
- Enhances early breastfeeding behaviours

For Families

- May reduce risk of depression and anxiety
- Helps with bonding and attachment
- Improves breast milk supply
- Improves breastfeeding success long-term, in exclusivity and duration
- Increases parents' confidence in ability to care for their infant

Kangaroo Care Wraps in the NICU

