

The Cocoon Project: Improving Developmentally-Supportive Care in a Canadian NICU

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Aim

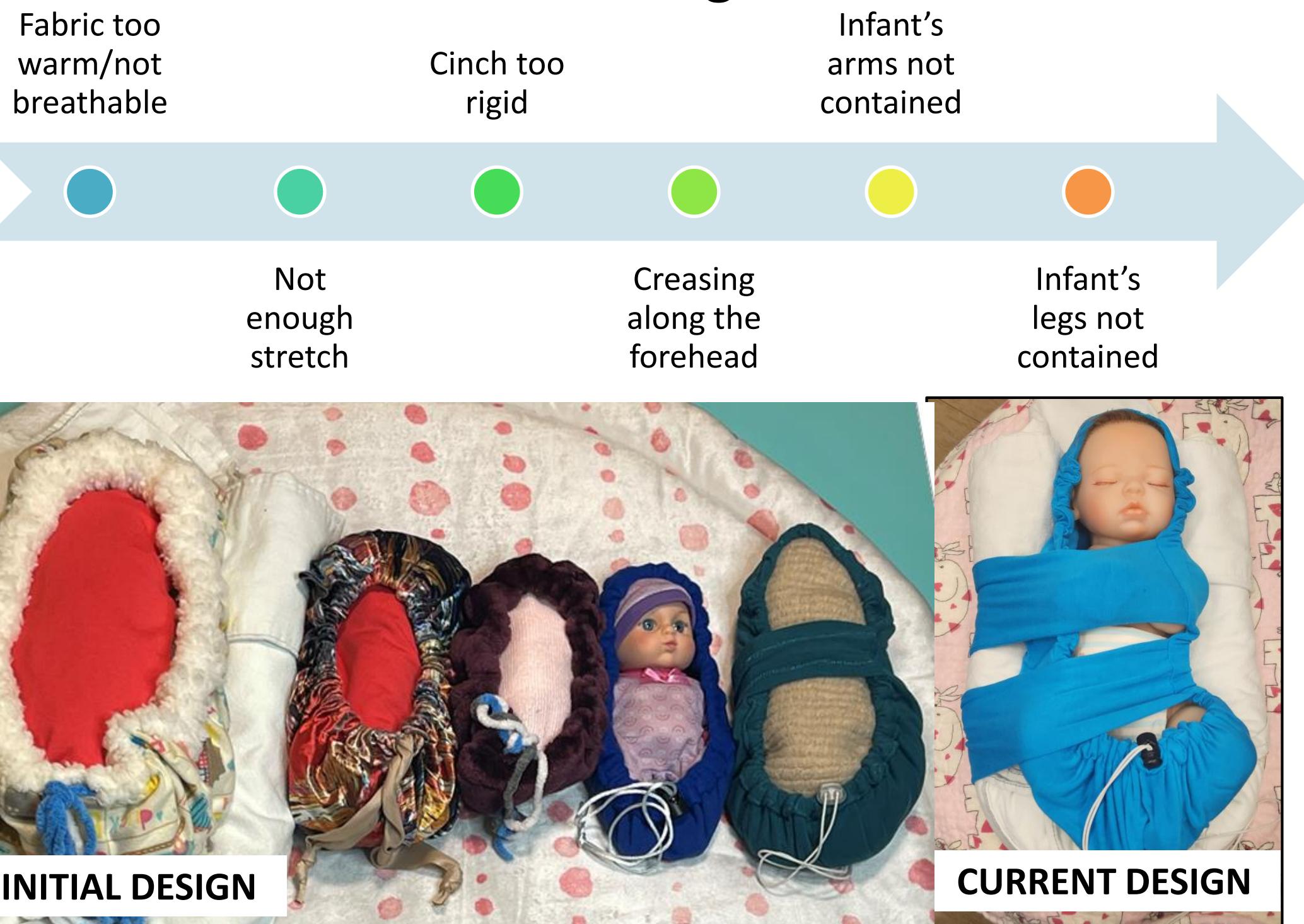
To improve developmentally-supportive care in the NICU by providing consistent infant containment, alignment, and comfort.

Background

"Cocoon: (noun) a safe, quiet place¹"

The Cocoon was created to further mimic the intrauterine environment in a NICU setting. The specially-designed wrap optimizes containment, alignment and comfort. It is user-friendly and the infant is highly visible and accessible to caregivers.

The Cocoon Design Process



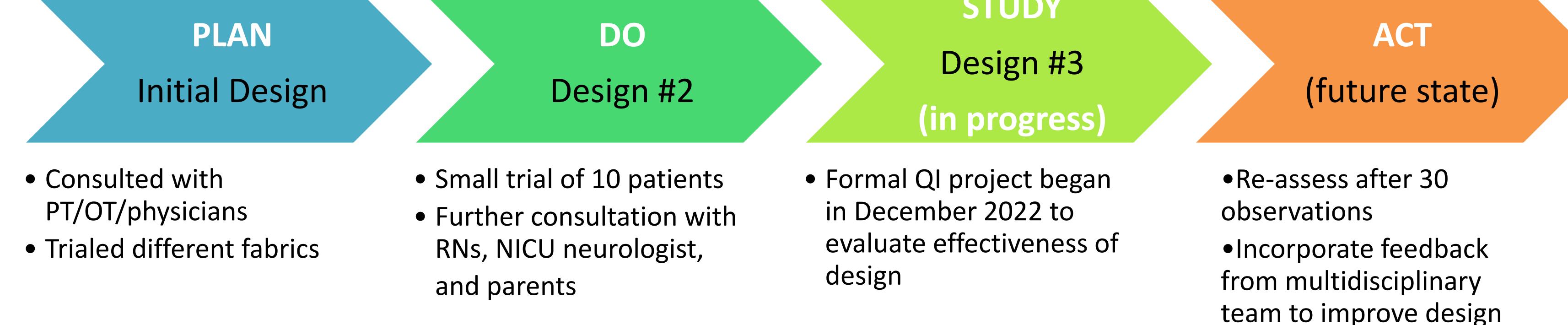
QI Project

Purpose: To assess effectiveness of the Cocoon wrap by observing the length of time for an infant to "settle" once placed in the Cocoon. For the purpose of our project, "settling" is defined as:

- Vital signs better than baseline and within normal limits in context of clinical picture
- Achieve quiet alert or sleep behavioural state

¹. Cambridge University Press. (n.d.). Cocoon. In *Cambridge Dictionary*. Retrieved January 10, 2023 from <https://dictionary.cambridge.org/dictionary/english/cocoon>

PDSA cycle



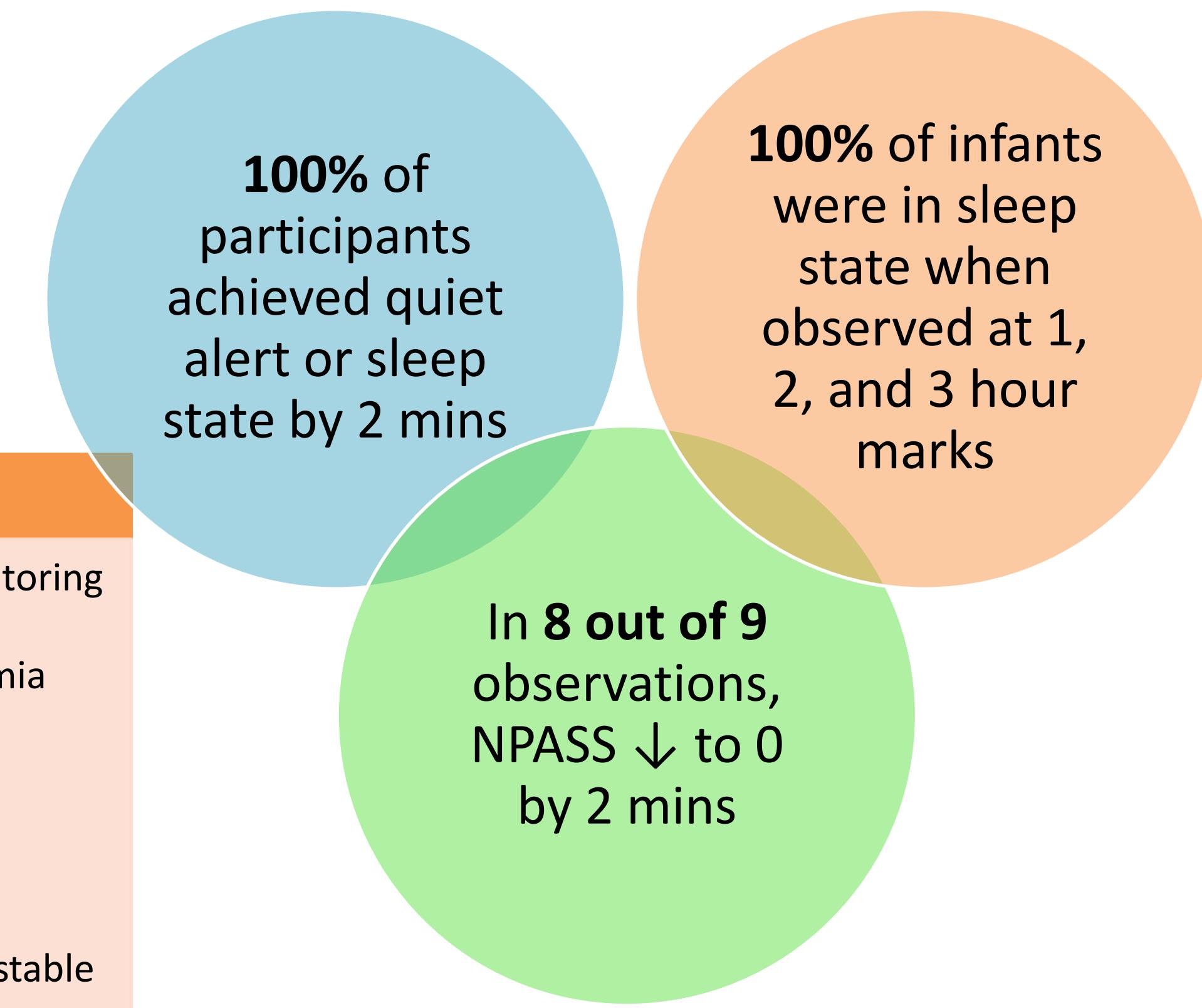
Preliminary Data (project ongoing)

Total observations to date: 9

- Participants are in active alert, crying, or irritable behavioural states prior to placement in the Cocoon
- Participants are placed in the Cocoon at the end of care. Vital signs, Neonatal Pain, Agitation and Sedation Scale (NPASS) score, and behavioural state is recorded at 2, 5, 8 minutes, and then hourly

Inclusion Criteria	Exclusion Criteria
<ul style="list-style-type: none"> Identified as: <ul style="list-style-type: none"> -"active", -"irritable", -"doesn't tolerate nasal prongs" on non-invasive ventilation Any gestational age 	<ul style="list-style-type: none"> Continuous aEEG monitoring or suspected seizure Therapeutic hypothermia Chest tube in situ Sedating or paralyzing medications Neonatal Abstinence Syndrome (NAS) or otherwise clinically unstable

After the infant was placed in the Cocoon:



Lessons Learned & Next Stage

→ **Lessons Learned:** Include Infant Positioning Assessment Tool (IPAT; used to evaluate posture of premature infants) scoring in data collection; record use of other comfort strategies (soother, hand hugs, etc) in data collection

→ **Next stage:** Expand project to include infants with NAS; observe use of Cocoon with infants undergoing routine painful procedures in NICU (lab draws, NG/OG insertion, IV starts, ROP exams)