

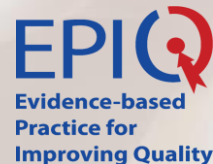
# Minimal handling during the first critical hours of life: A prospective nursing driven audit



Hôpital St-Boniface Hospital

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# Who We Are



# Current Site Update

- From the 2019 EPIQ data our points for *celebration*:
  - BPD rates
  - NI and CLABSI
- Points warranting *attention*:
  - Mortality rate
  - Severe neurological outcomes

# Background

- ELGA guideline
- 72 hour critical time
- Unit focus on cue based care
- Strive for handling times less than 15 minutes per handling instance
- 30 minute goal for max time for line insertion

Post this sign for all babies who are born  $< 1000\text{g}$  &/or  $\leq 27$  weeks gestation for a minimum of 3 weeks

## Critical Time

Maintain Midline Flexed position for first 72 hours

Skin to Skin Care to Commence after 72 hours

Provide Care by Cues only, for example:

- Infant cries - check diaper/IV site
- Squirming or hand up - provide containment or human touch, allow infant to hold your finger
- Diaper changes, position changes and head to toe assessments can all be done at separate times and not necessarily at the time of a feeding
- Handling should never take longer than 10 mins, follow-up all handling with 5 mins of hands on containment

Continue to position infant flexed with support for 3 weeks

Follow Infant Stress Cues- Stop Handling if infant shows stress (i.e.  $\text{desat} < 88$ ) Provide containment & finish task only once infant recovers

Keep Ambient Lighting Low, Cover Isolette with Quilt or Cover Infants Eyes

Eliminate Unnecessary Noises:

- Whisper Voices only
- Close Isolette Doors Quietly
- Silence Alarms as Quickly as Possible (continue to watch infant's condition closely)

No bath in First 72 hours, then only every 4 days after that (use warmed sterile water)

After Birth Weight Obtained, no Weight in first 3 days, unless ordered by a Neonatologist

# Background

- EPIQ data r/t severe neurological outcomes
- Extending work from PDSA last year r/t Golden Hour (reducing time to first dextrose)

"Even though it is difficult to demonstrate, we believe that this [minimal handling & gentle care] may be an important intervention to explain the differences among the CNN sites" (EPIQ Brain Health Bundle, 2015)

# Purpose

**To quantify and describe our current handling practices for infants born under 29 weeks gestation for the first 96 hours of life**

1. How many instances of handling did an infant experience on each of the first four days of life?
2. What were the characteristics of those handling instances?
  - a. Duration of handling
  - b. Duration of breaks between instances of handling
  - c. Type of care provided during each instance of handling

# Plan

- Our EPIQ team developed:
  - Methods for audit
    - Nurse driven audit
    - Pedometer (trial)
  - Duration of audit
    - First 96 hours of life (4 days)
  - Audit tool; data extraction template; plans for analysis
    - Rest time
    - Categories of handling types



# Plan cont'd

- *Inclusion* criteria:
  - All infants under 29 weeks GA
- *Exclusion* criteria:
  - Death within the first 24 hours of birth
  - For those included, data for individual days was excluded if a time period of ~6 hours was not captured on the audit form

# Do

- Timeframe of audit:
  - January 2020 – December 2020
- Staff engagement:
  - Monthly NICU educational newsletters
  - Nurse champion CRN
  - Progress presentation at ½ way point for bedside staff

# Study

- Results

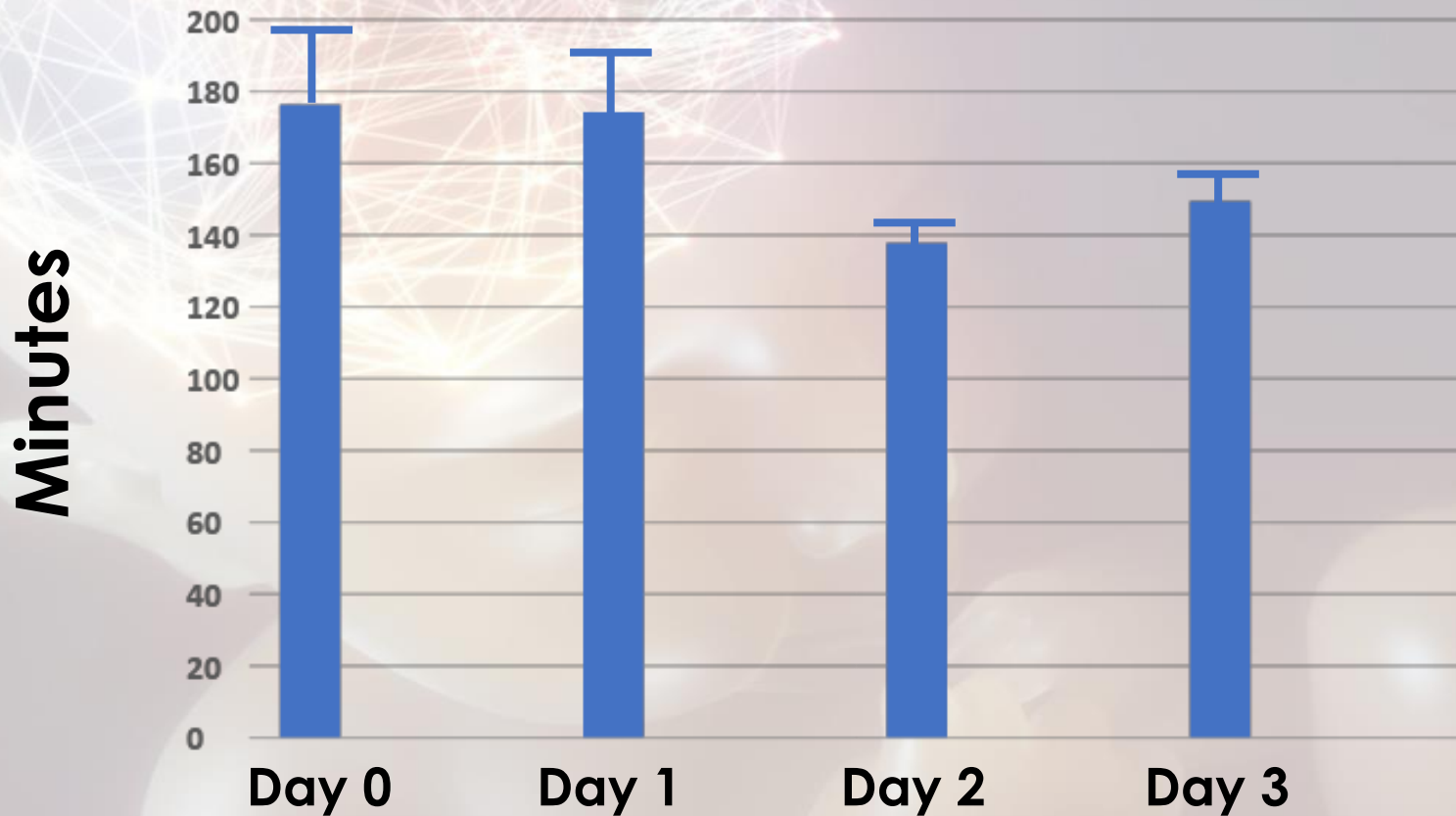
- 28 infants born under 29 weeks in 2020
- 21 infants included in audit
- Of the 7 excluded:
  - 4 died within 24 hours of birth
  - 3 were missed r/t staffing and audit roll out

Audit Day	Infants Included in Analysis
0	10
1	18
2	18
3	19

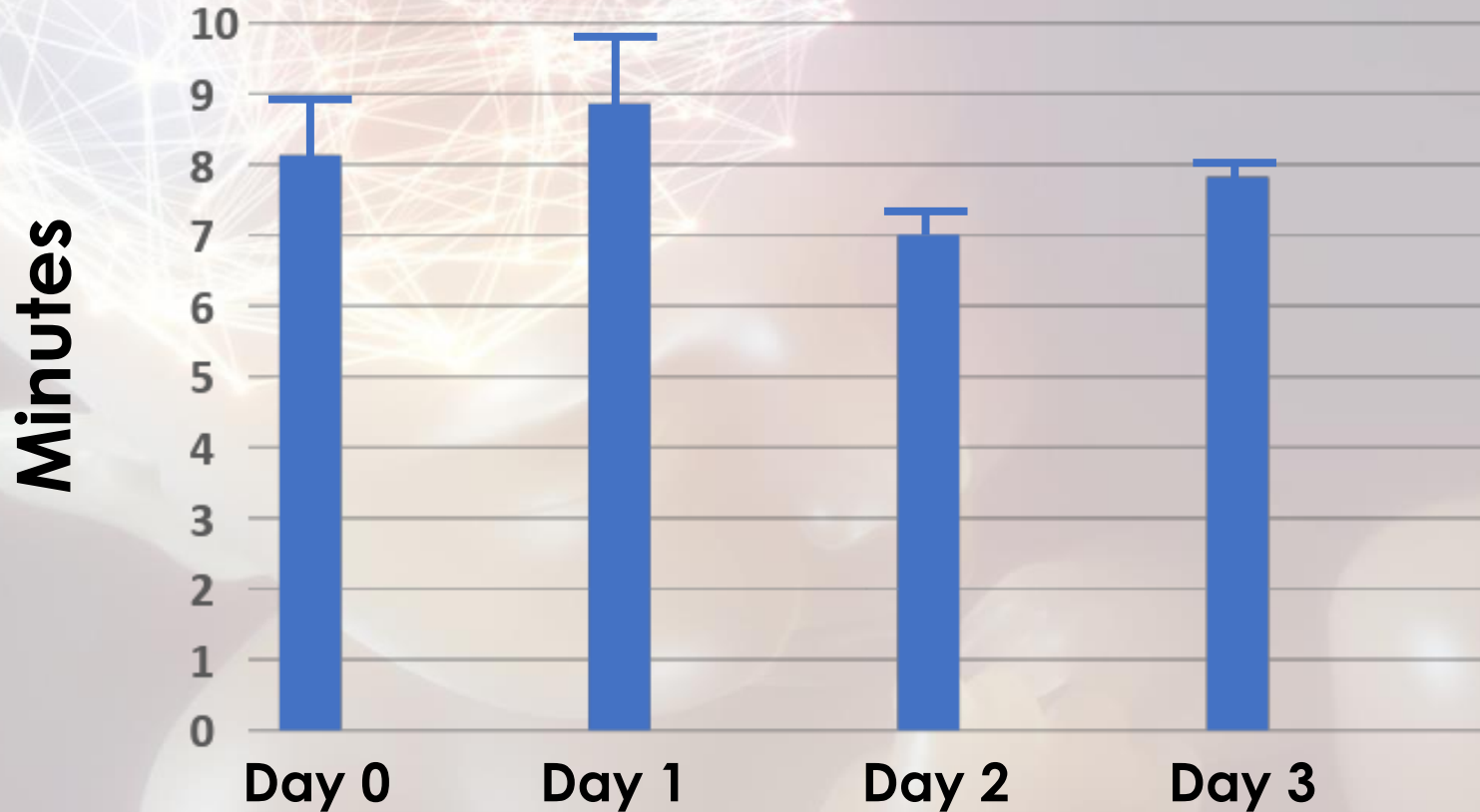
# Study cont'd

	<b>GA (weeks)</b>	<b>BW (g)</b>	<b>Combined SNAP-II and SNAPPE-II</b>
<b>Mean</b>	26.1	955	30.8
<b>Minimum</b>	23	475	0
<b>Maximum</b>	28	1410	92
<b>SD</b>	1.31	189.22	25.04
<b>SEM</b>	0.29	41.29	5.46

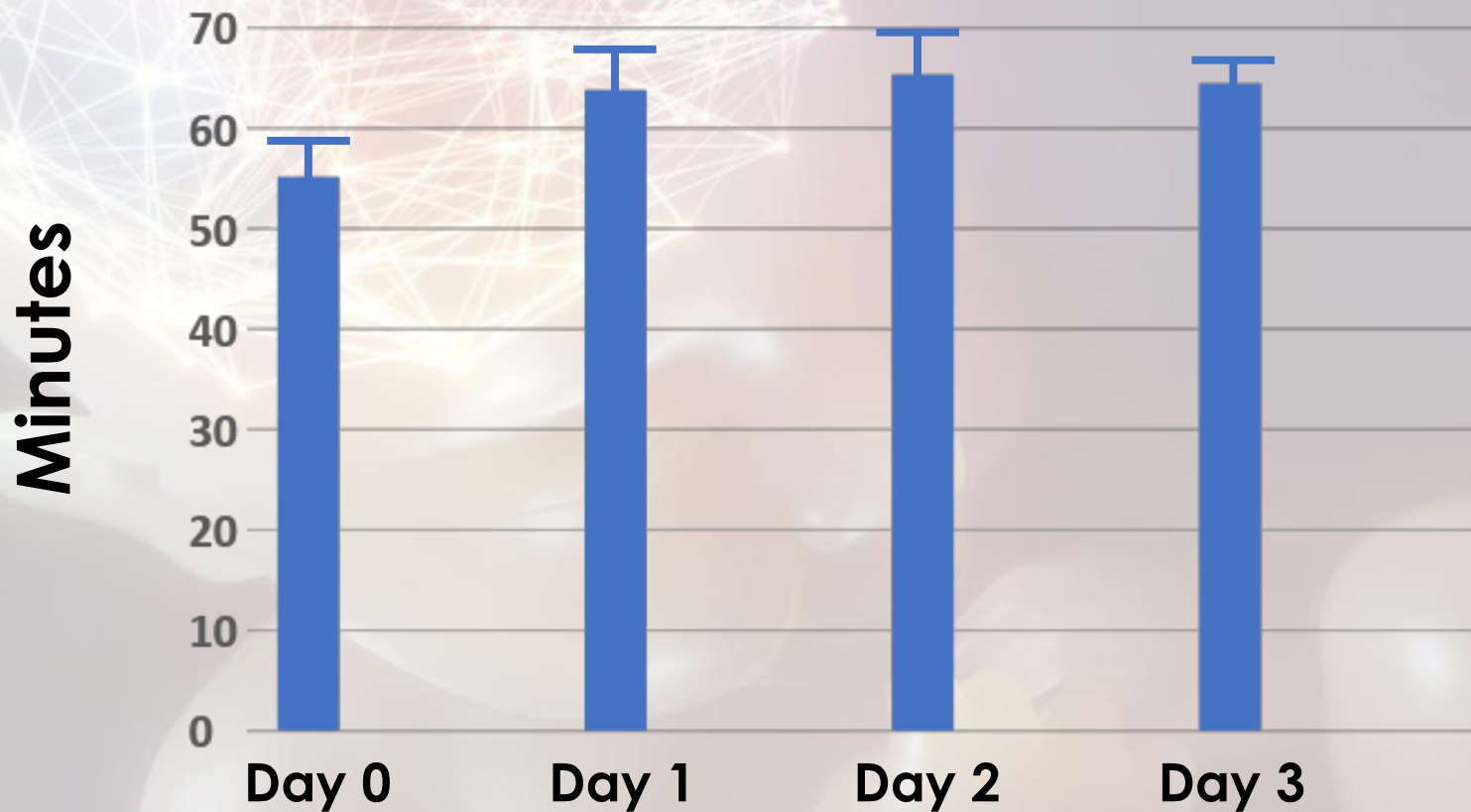
# Total time of handling per day



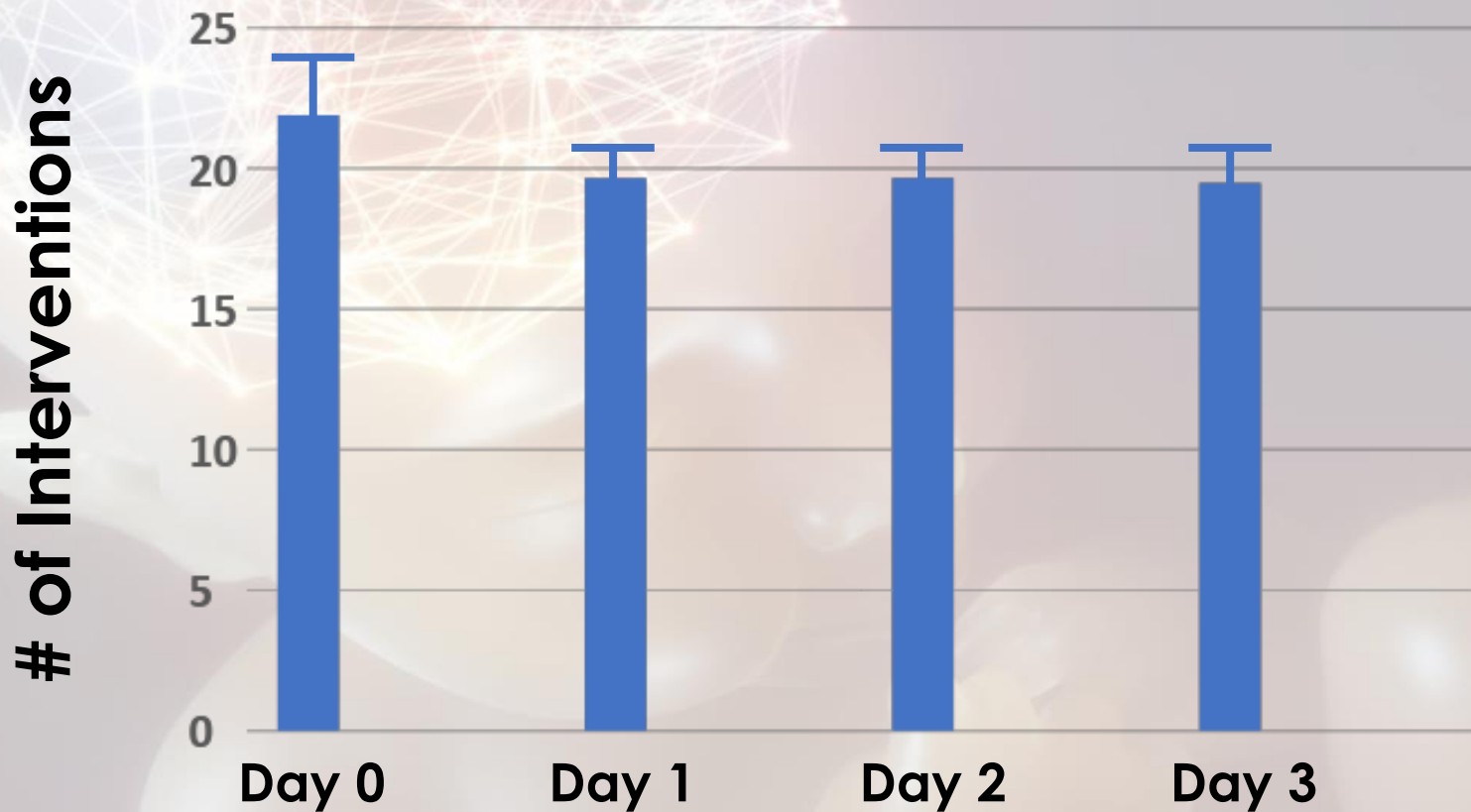
# Duration of each handling instance per day



# Duration of each rest interval per day



# Number of handling instances per infant per day

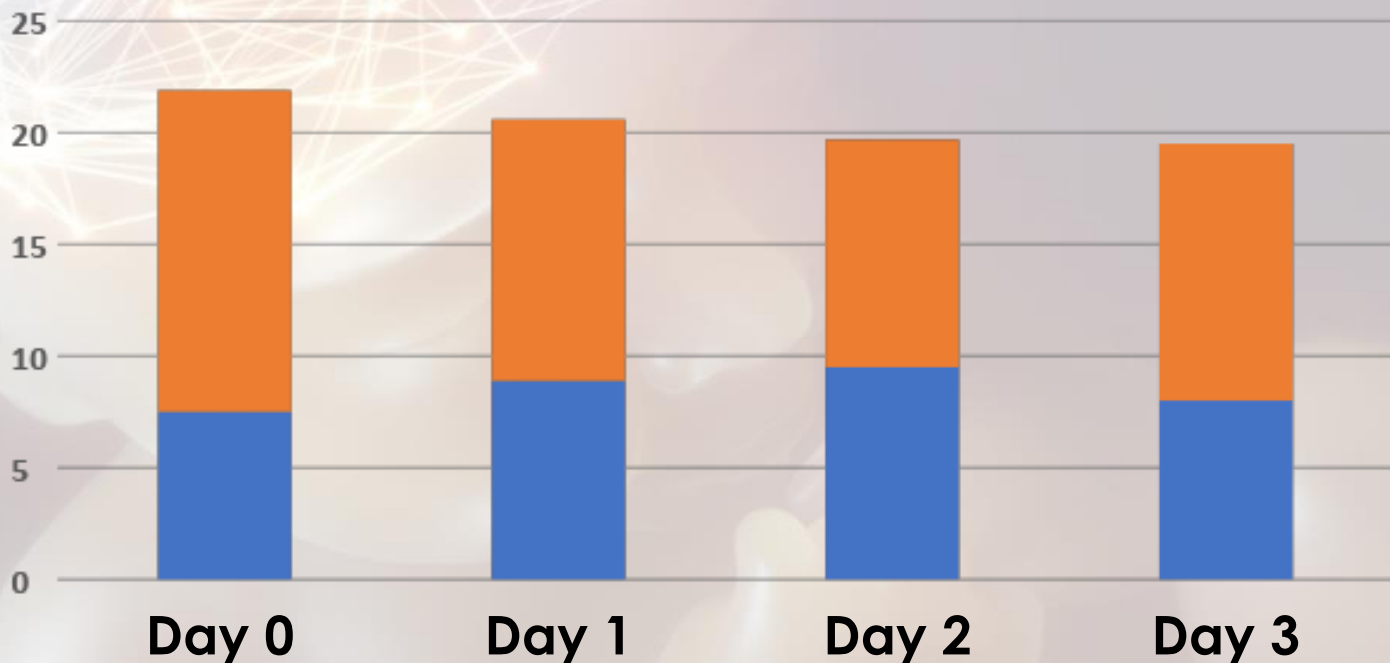




# Number of handling instances per infant per day



Interventions  
(# per day)



# Act

- Infants are handled too much during the critical time period; insufficient time to rest
- There is opportunity for:
  - a greater number of interventions to be grouped with feeding in order to enhance rest periods
  - clustering care proactively, strategically, and consistently for this population

# Act

- Our project working group will continue QI work:
  - Qualitative work
  - Develop intervention(s) to:
    - decrease duration of time infants are handled
    - cluster care
    - enhance rest opportunity
- Re-audit to examine for improvement

# Questions?



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