Memorial Hermann Memorial City Medical Center

The Memorial Hermann Memorial City Medical Center (MHMCMC) is strategically situated in the dynamic Memorial Area of Houston, TX. Functioning as a State Designated Level III NICU, we have the capacity to deliver specialized care to around 750 infants annually, providing a comprehensive array of neonatal services. Our committed team actively participates in community outreach, delivering NRP (Neonatal Resuscitation Program) education to nearby community hospitals. Furthermore, we work in partnership with our regional emergency medical services (EMS) to ensure smooth and efficient care for all our neonatal patients within the community.

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Improving Breastmilk Culture to Optimize Nutrition in the NICU

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MHMCMC Team acknowledgement

- A. Tsai, MD (Neonatal Medical Director; Medical Provider Lead)
- O. Pham, MD (Lead Neonatal Provider Support)
- E. Huckaby, MSN, RNC-MNN, C-ONQS (NICU Clinical Manger; Senior Leader)
- K. Hart, DNP, MHA, RN, RNC-NIC (NICU Director; Senior Leader)
- K. Ward, MSN, RN, C-ONQS (Neonatal Program Manager; VON Champion)
- J. Salley, BSN, RN, CLC (NICU Lactation Consultant; Project Lead)
- K. Shaw, BSN, RNC-MNN, CLC (Family Life Center Lactation Consultant; Project Co-Lead)
- C. Lambert, MS, CCC-SLP (Speech-Language Pathologist III)
- L. Smart, PT, DPT, NTMTC (Physical Therapist II)
- S. Morace, BSN, RNC-NIC, C-ELBW (Parent and Family Support Coordinator)
- D. Cirelli, MSN, RN-Ed (Clinical Education Specialist)
- A. Alford, BSN, RNC-NIC (NICU Clinical Coordinator)
- J. Dolan, BSN, RN, C-ELBW (NICU Assistant Manger)
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- Project Support Team:
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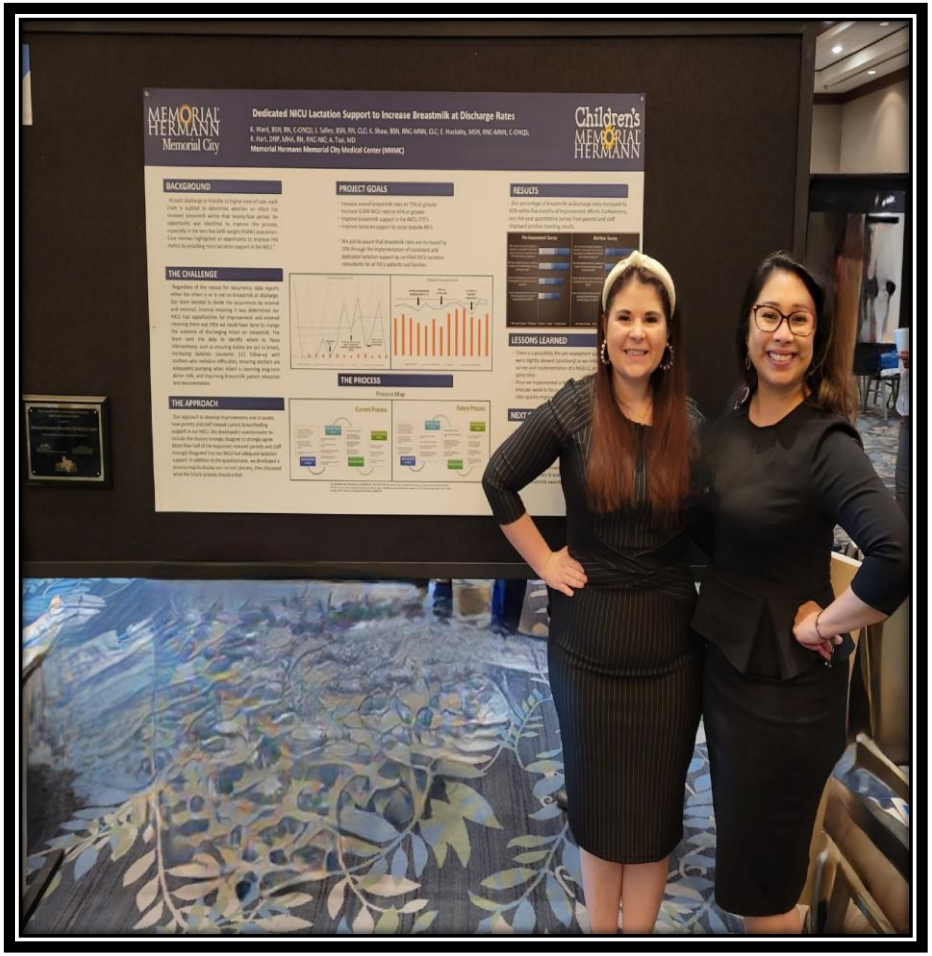
Regional Improvement Award

(Overall VLBW Breastfeeding at Discharge)

K. Ward, MSN, RN, C-ONQS; J. Salley, BSN, RN, CLC; K. Shaw, BSN, RNC-MNN, CLC; A. Tsai, MD



Regional Improvement Award

(All Babies Breastfeeding at Discharge)

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MHMCMC Team Fun!

Prematurity Awareness Day

Employee Appreciation

Daisy Team Award

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Some things you might not know about us

The MHMCMC campus has a unique architectural design, we call it the “big blue crown”. Our building was featured in the Netflix series, “Away”!

Rationale for Project

What did you learn from your review of Nightingale?

After comparing our center with similar centers in Nightingale, we found that our rate of infants receiving breastmilk at discharge home was significantly lower than the average. Specifically, for infants weighing between 501-1500 grams, our center's rate was 44.1%, while other centers were at 58%. This difference emphasizes the need to implement strategies to improve our breastmilk culture and to promote and support breastfeeding among mothers and infants in our care.

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How does this project relate to your organizational, program and department priorities?

Comparing our data within our regional advisory council (RAC), our data represented very low birth weight (VLBW) babies discharged from our center were less likely to receive breastmilk at discharge. Moreso, multiple survey audits conducted with our RAC determined we were in the bronze category, meaning ≥ 45% of our VLBW population does not receive breastmilk at discharge.

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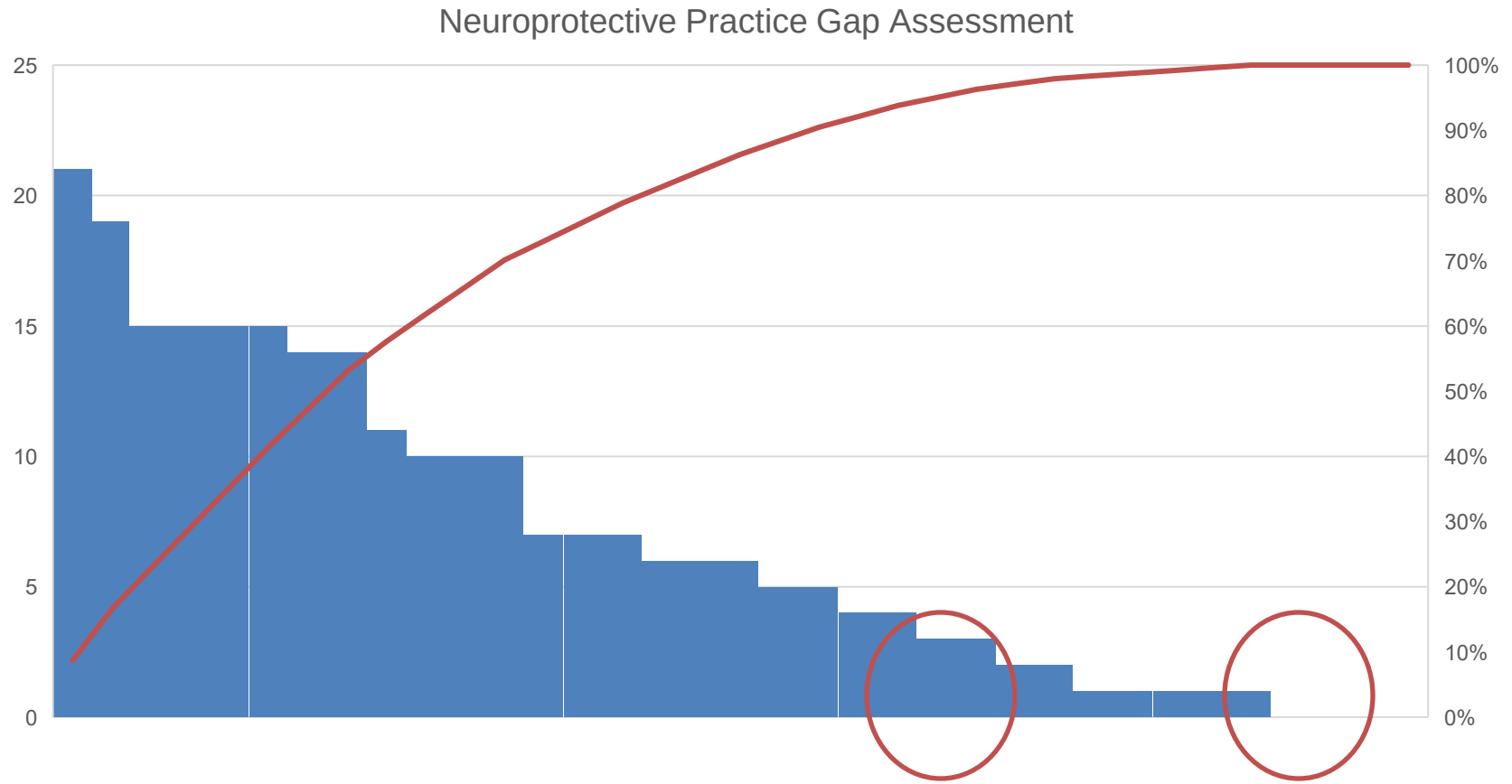
What did you learn from conducting the Neuroprotective Practice Gap Assessment?



After conducting the Neuroprotective Practice Gap Assessment, we discovered that although we currently make use of mother's own milk (M.O.M.) and donor expressed breastmilk (DEBM), we do not consistently prioritize their continued usage until discharge according to our data. Additionally, we observed that while infant-driven feeding (IDF) is used in practice, it could be further improved, such as ensuring that breastfeeding precedes bottle feeding.

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What evidence did we find to support our project?

Urgency:

- Evidence-based practice highlights that M.O.M. is not only important for gut health especially VLBW infants, but life-long bonding.

How to tie in All Care is Brain Care:

- As per the AAP Policy Statement, mother's own breastmilk has been associated with multiple health benefits for VLBWs, including lower incidences of NEC, late-onset sepsis, CLD, ROP, and neurodevelopmental delays (Parker et. all, 2021).

What we learned that impacts our families

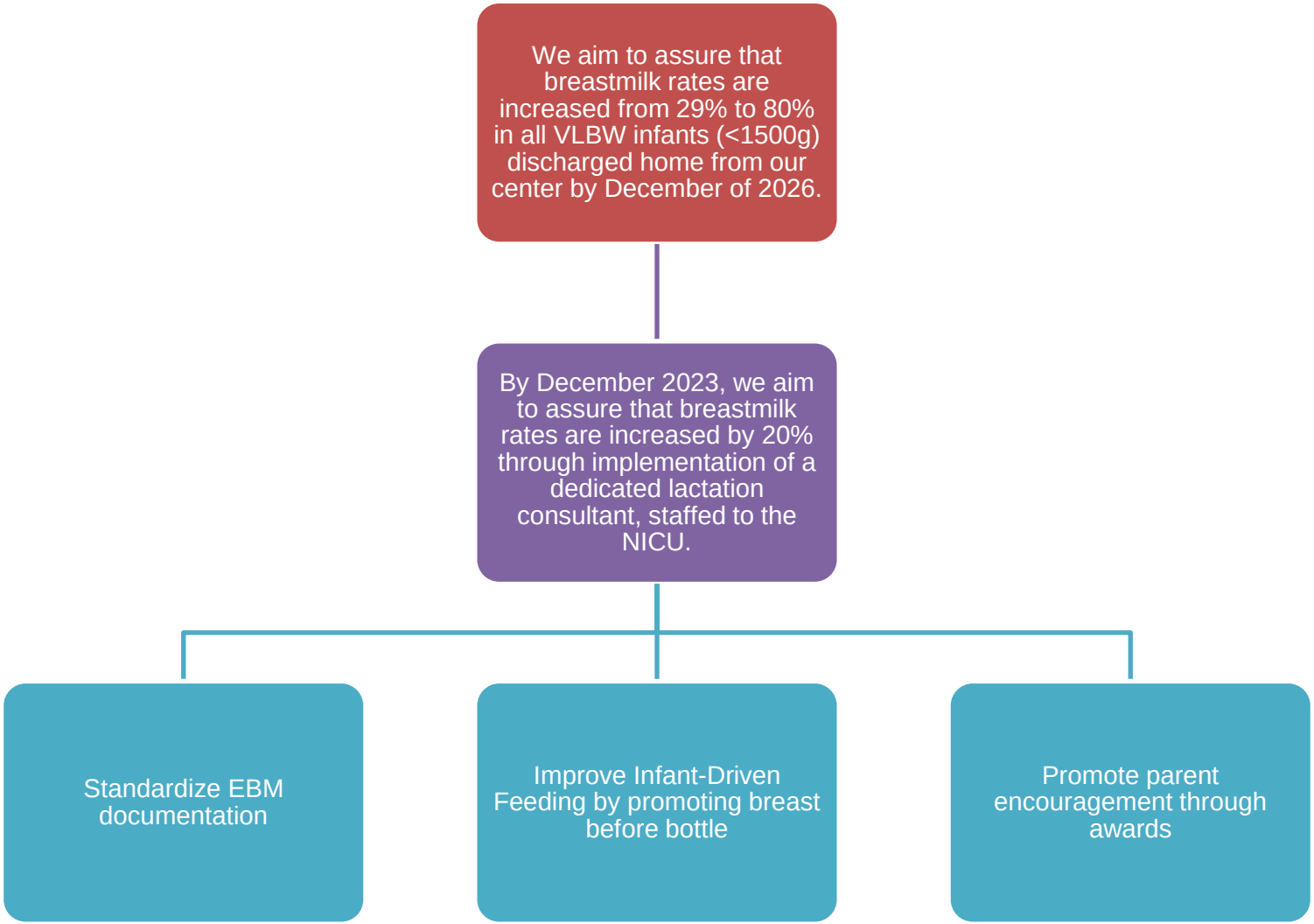
Lactation Support:

- Our center did not have a dedicated lactation consultant (LC) in the NICU.
- LCs were prioritized to well-newborn infants and their mothers who were still admitted in the hospital.
- Once the mother was discharged, they were only seen by LCs as time permitted.

Lack of Consistency in Care:

- While every employee in Women's and Children's Services are equipped with a minimum of 20 hours of breastfeeding education during new-hire orientation, some nurses were not comfortable with assisting NICU mothers with breastfeeding and/or education.
- Depending on the patient work-load for the shift, was also very dependent on assisting mothers with breastmilk support.

Hierarchy of Aims



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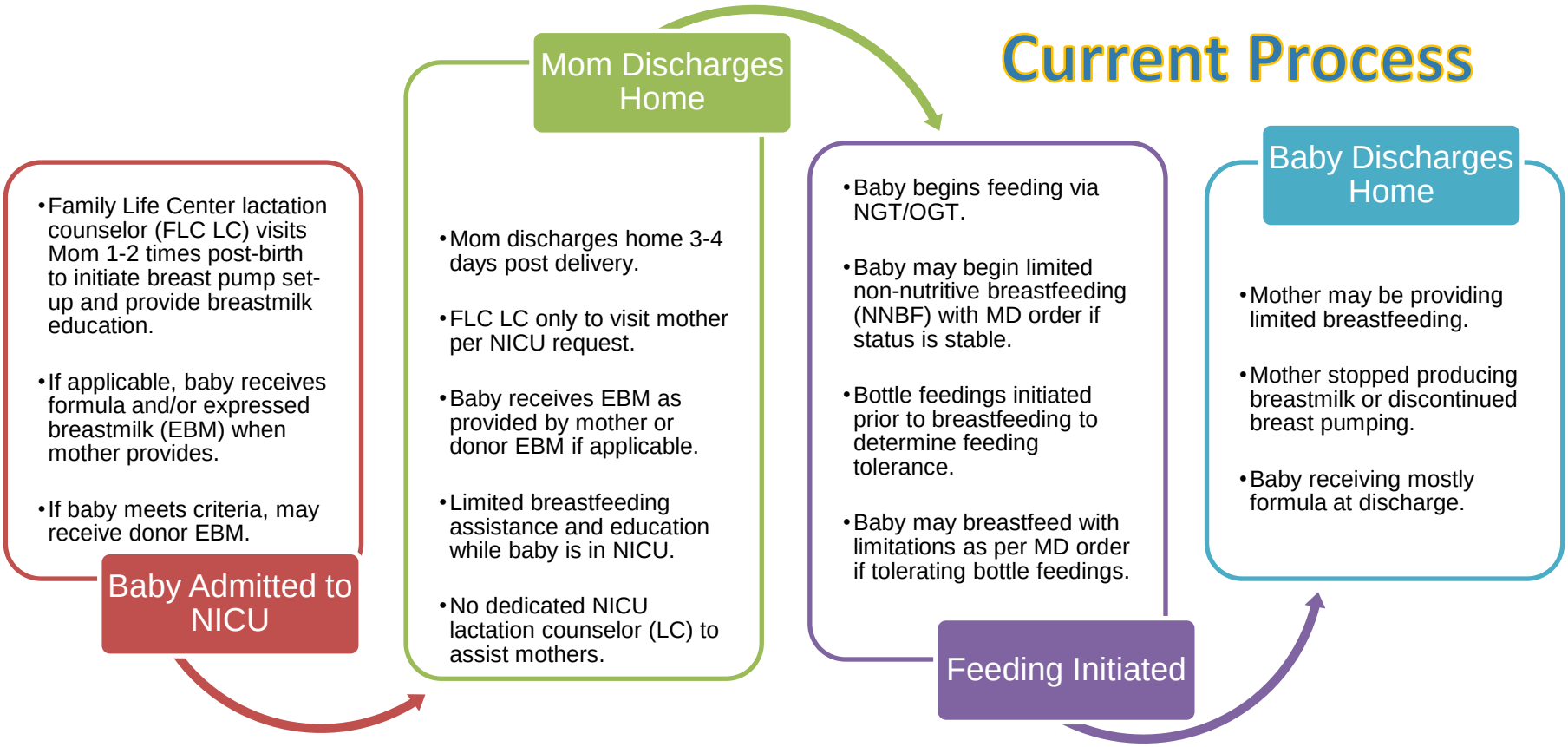
Process Map



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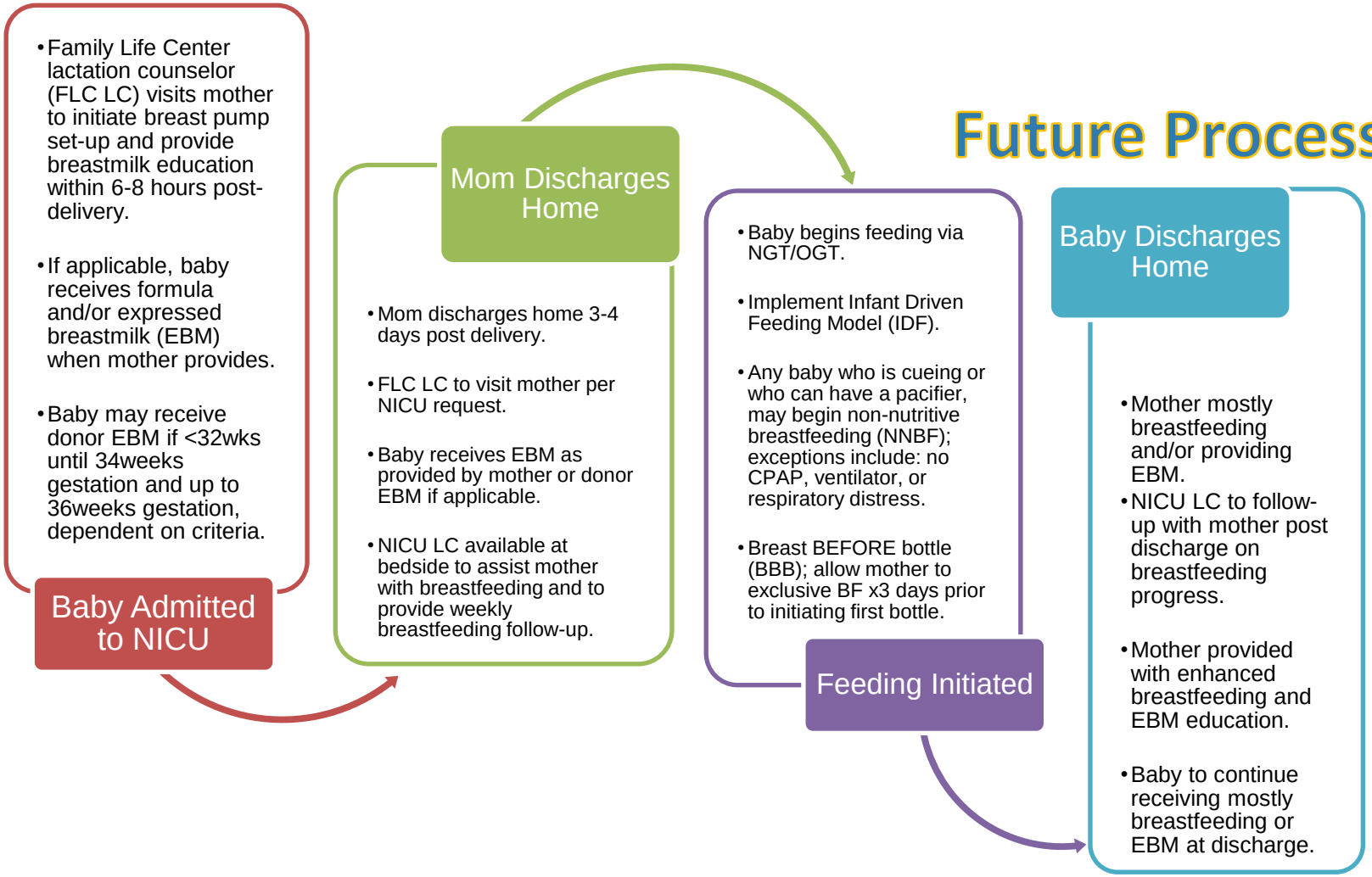
Process Map



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Tests of Change

PDSA One:

- Pre-assessment survey to both Parents and Staff to determine the amount or level of breastfeeding support in the NICU.
- Our 5-point Likert scale showed that:
  - Parents strongly disagreed with the statement of feeling supported in breastfeeding
  - Parents strongly disagreed with the statement of continuing to breastfeed at home after discharge.
  - Staff disagreed with the statement of feeling parents had adequate breastfeeding support in the NICU.
  - Staff disagreed with the statement that they had enough time during their shift to assist breastfeeding mothers properly.
- The pre-assessment survey results were a driving factor in the need for a dedicated lactation consultant (LC) in the NICU.

PDSA Two:

- Once we implemented a dedicated NICU LC, positive results were immediately noticeable.
- However, only one dedicated LC was assigned to the NICU, and mothers would often wait for the LC to ask questions regarding breastfeeding.
- We tested standardized documentation to ensure breastfeeding mothers were being provided with essential education for breast feeding success in times the LC was unavailable.
- This test determined staff were not sure how to ask open-ended questions regarding breastfeeding or breast pumping
  - Breastfeeding conversation cards were created.

PDSA Three:

- Post-implementation survey to both Parents and Staff to re-determine the amount or level of breastfeeding support in the NICU.
- Our 5-point Likert scale showed that:
  - Parents strongly agreed with the statement of feeling supported in breastfeeding
  - Parents strongly agreed with the statement of continuing to breastfeed at home after discharge.
  - Staff strongly agreed with the statement of feeling parents had adequate breastfeeding support in the NICU.
  - Staff agreed with the statement that they had enough time during their shift to assist breastfeeding mothers properly (because mothers were comfortable and well educated, therefore requiring little assistance from the RN).
- Feedback during the post-implementation survey indicated a need for breast-before bottle feedings.

PDSA Four:

- With the feedback we received, we began to focus on infant driven feeding (IDF).
- An algorithm was created to determine when and what cues to monitor for to promote breast before bottle feeding.
- We performed bedside education, created visuals at each nursing station and in patient rooms.
- We also created fun milestone stickers for the infants and parents.
- Go-live was initiated!
  - Audits produced an average completion of 80-95% per shift of infants scored with the IDF Algorithm to promote breast before bottle.

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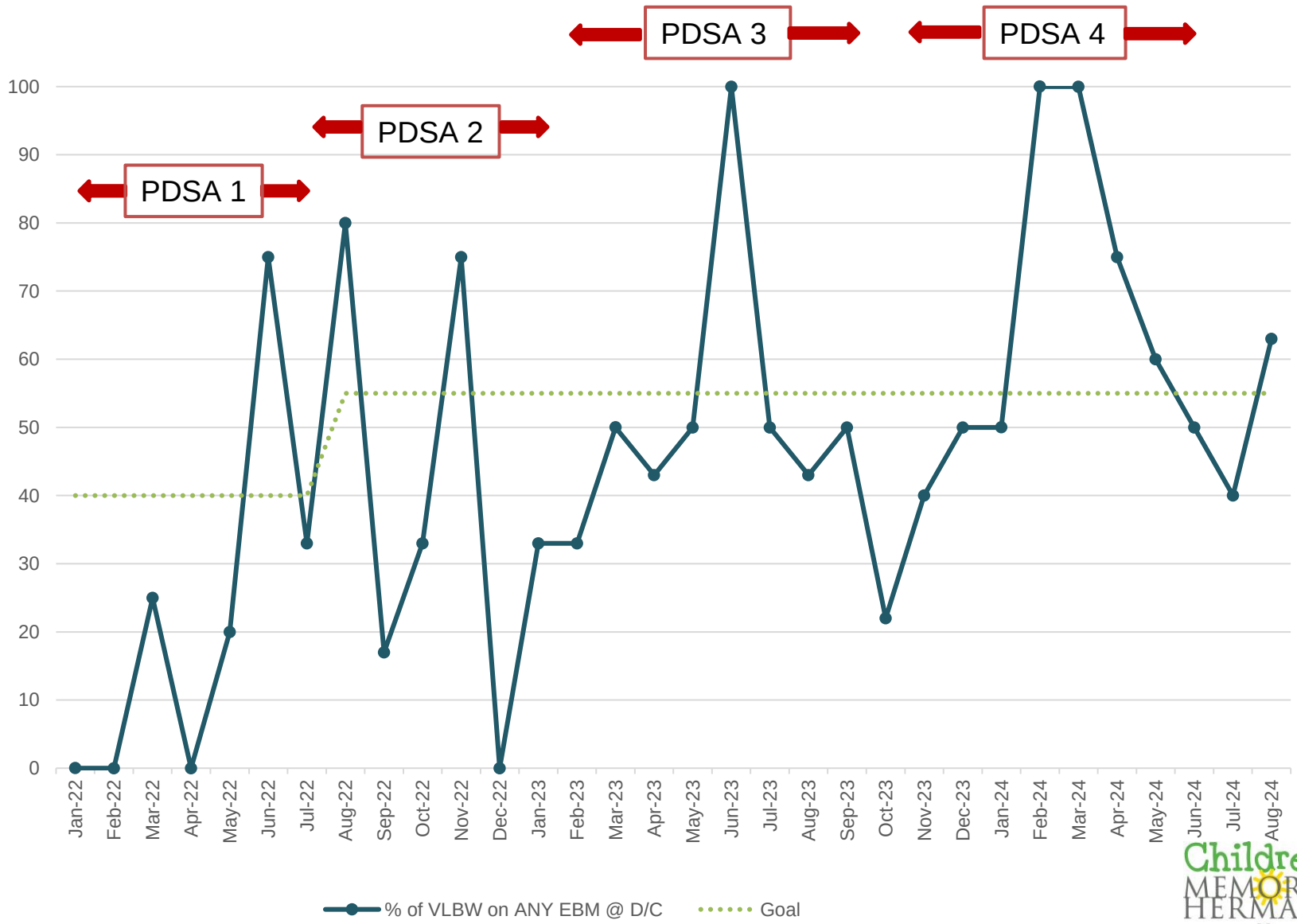
Percentage of VLBW infants discharged home from the NICU on EBM



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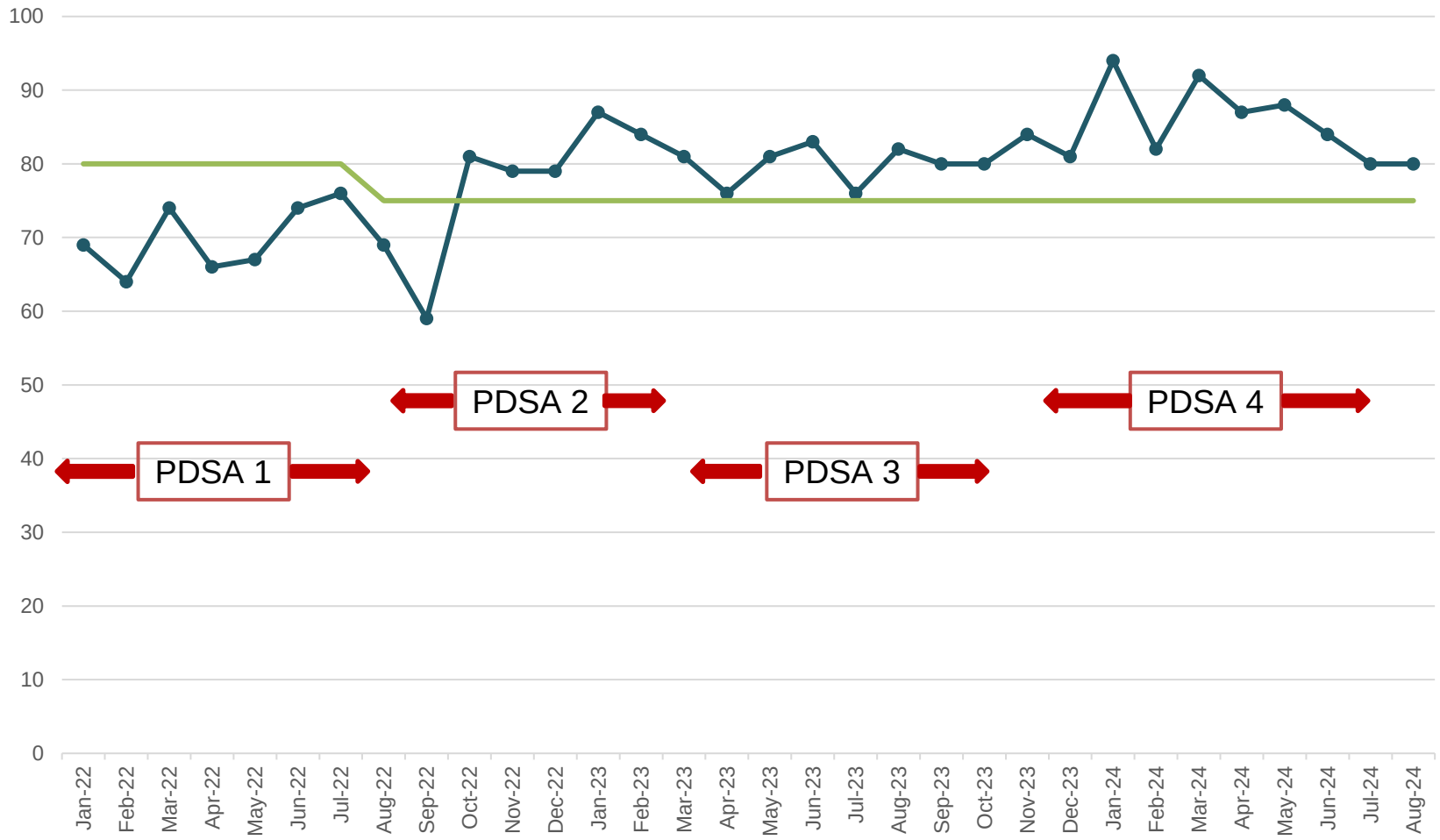
Percentage of all infants discharged home from the NICU receiving EBM



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Key Lessons Learned

- Positive feedback from Providers regarding LC availability to help the mother.
- Tremendous positive feedback from parents regarding LC availability, including encouragement and support to continue breastfeeding once discharged home.
- Conversation cards assisted staff to prompt specific questions regarding breastfeeding and breastmilk, which in turn increased the culture at the center.
- Additional breastfeeding and breast pump supplies were added to the supply room.
- Standardized education specifically tailored to breastfeeding premature infants was fundamental for collaboration between Family Life Center and NICU.
- Supplementation after breastfeeding explained by IDFA gave parents a more objective plan.

Surprises and Challenges

What happened that was not expected?

- System-wide new EMR platform forced us to hold standardized documentation on our IDF scoring system until after implementation of the new platform.

Share any revelations about your QI culture

- Breastmilk and breastfeeding has become a standard part of the discussion during rounds.
- Our center has rapidly grown over the last few years. It is vital that we offer more support services to the overarching theme of All Care is Brain Care to the community.

Share relevant challenges and how your team addressed them

- If an infant is on a specialty formula, attempts have been made to incorporate M.O.M. into the regimen as appropriate.
- IDFA scoring has helped standardize the supplementation given after breastfeeding.

We are most proud of

- All the NICU providers at our center have emphasized the importance of breast milk and breastfeeding to parents.

We Would Appreciate Your Help With

- Are there other ways to help mothers of VLBW infants to keep pumping until discharge?
- How to overcome challenges with infants who require a specialized diet?

References

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