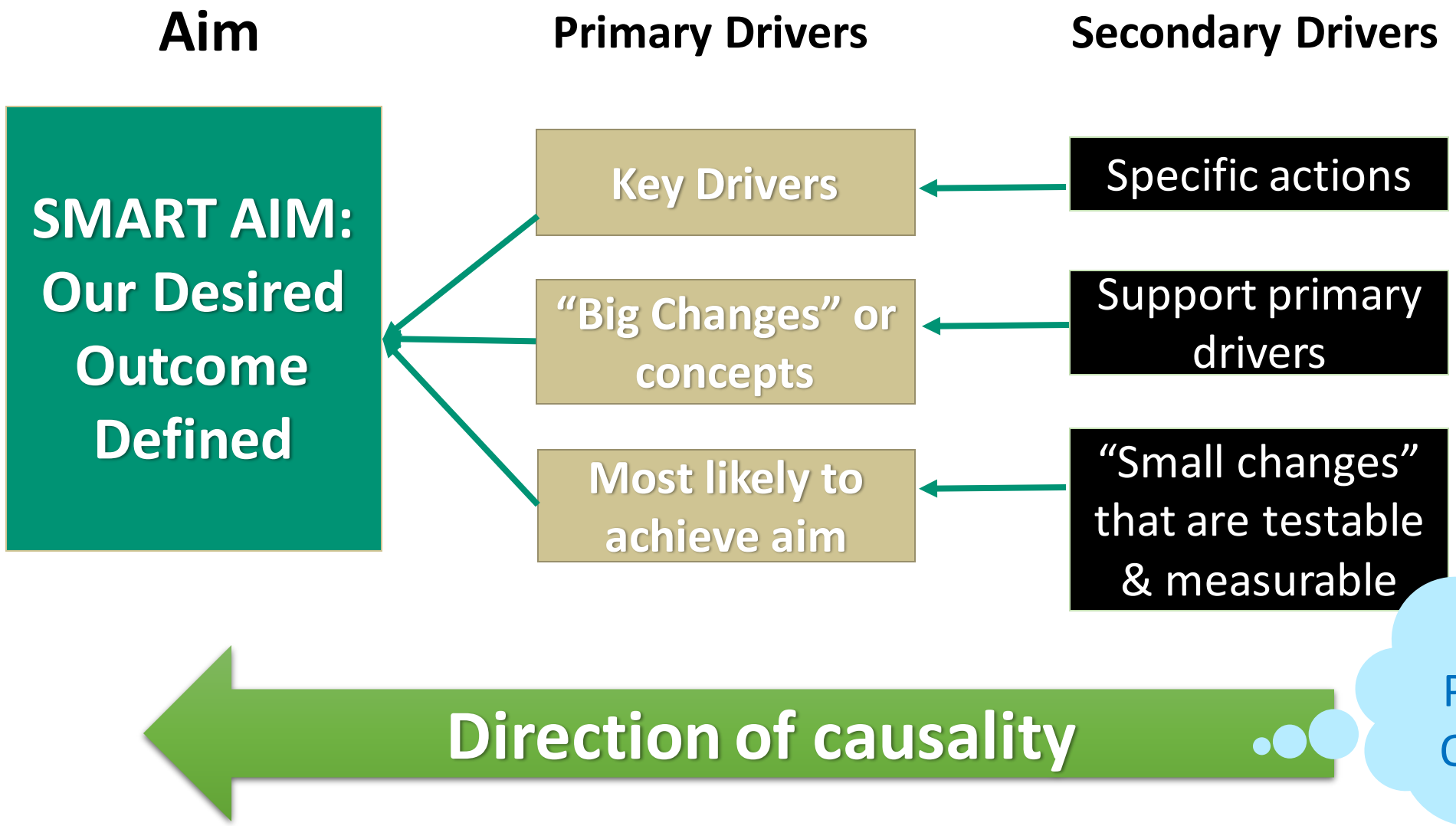
Data for Impact: Measuring What Matters

Estefania Rubio, MD, MPH
SOOTHE Advisory Committee

FPQC

Key Driver Basic Concepts



Aim

By 6/2027, 80% of participating NICUs will:

Implement at least 1 evidence-based strategy from each of these sensory domains (sight, sound, touch, and taste/smell) to improve the sensory environment

Achieve a 20% increase in families educated on recognizing and responding to infant stress cues

* Q4 2025 data will be collected as baseline data.

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Global aim: Support hospitals and care teams in fostering a neuroprotective NICU culture by training staff and providers, engaging families, optimizing developmentally appropriate sensory care, and minimizing unnecessary interventions to promote a nurturing environment for infants.

Aim

By 6/2027:

- 80% of participating NICUs will implement at least 1 evidence-based strategy from each of these sensory domains (sight, sound, touch, and taste/smell) to improve the sensory environment
- Achieve a 20% increase in families educated on recognizing and responding to infant stress cues

Primary Key Drivers

- **Sensory Environment**
- **Noxious Stimuli**
- **Positive Touch/Interactions**

Respectful care is a universal component of every driver & activity

SOOTHE
Supporting **Optimal Outcomes**
Through a **Healing Environment**

Primary Key Driver

Secondary Drivers

Readiness:
Sensory Environment

- Modulate sound and provide positive auditory input
- Promote a developmentally appropriate light environment
- Enhance early olfactory and oral sensory experiences
- Optimize developmental positioning and transition to safe sleep

Structural Measures

Impleme within the

Implemen than 3 mo routine pr

Implementing for more than 3 months and **routine practice** (80%+)

To what extent has your hospital:	Not Started	Planning/ Developing	Started to Implement	Implemented	Fully Implemented
Implemented a reading program to promote a language-rich environment through shared reading (books and tools available) and engaging families in early communication with the infant?	☐	☐	☐	☐	☐
Implemented a policy, guideline, and/or procedure for routine use of evidence-based calming sounds (e.g., white noise, lullabies, or recorded parent voice) within recommended noise limits (≤ 45 DBA) with an audio device available to support this practice?	☐	☐	☐	☐	☐
Implemented written lighting guidelines that include gestational age-appropriate dimming, light cycling for infants ≥ 32 weeks GA, and special population guidance (e.g., procedures, ELBW, Golden Hour, and transitions)?	☐	☐	☐	☐	☐

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Supporting Optimal Outcomes Through a Healing Environment

Primary Key Driver

Secondary Drivers

Protect and preserve skin integrity

Recognition: Noxious Stimuli

Skin Management

Check any skin conditions documented throughout the entirety of the infant's NICU stay:

- ☐ Pressure injuries
- ☐ Medical Adhesive-Related Skin Injury (MARSI)
- ☐ CPAP-related injuries
- ☐ Other non-surgical open wound: _____
- ☐ None

% Patients in the monthly sample!

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Supporting Optimal Outcomes Through a Healing Environment

Primary Key Driver	Secondary Drivers
Recognition: Noxious Stimuli	Protect and preserve skin integrity
	Provide cue-based care

Regarding Family Caregiver training and inclusion in care, check only items with a documented date:	**Family Caregiver:** ☐ Received training on recognizing infant cues ☐ Demonstrated ability to recognize infant cues	**Select Caregiver** ☐ Mother ☐ Father ☐ Other_____ ☐ Mother ☐ Father ☐ Other_____

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Supporting Optimal Outcomes Through a Healing Environment

Primary Key Driver	Secondary Drivers
Recognition: Noxious Stimuli	Protect and preserve skin integrity
	Provide cue-based care
	Minimize pain from interventions

Number of Laboratory Test Results (see details on the back)		
Total # _____	Hematology # _____	Chemistry # _____
	Coagulation # _____	Blood Gases # _____

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Supporting Optimal Outcomes Through a Healing Environment

Primary Key Driver

Secondary Drivers

Promote developmentally supportive positive touch

Response: Positive Touch/Interactions

Regarding Family Caregiver training and inclusion in care, check only items with a documented date:	**Family Caregiver:** ☐ Received training on recognizing infant cues ☐ Demonstrated ability to recognize infant cues ☐ Received training on intentional, positive touch ☐ Demonstrated ability to respond with intentional, positive touch to infant cues ☐ None	**Select Caregiver** ☐ Mother ☐ Father ☐ Other_____ ☐ Mother ☐ Father ☐ Other_____ ☐ Mother ☐ Father ☐ Other_____ ☐ Mother ☐ Father ☐ Other_____

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Supporting Optimal Outcomes Through a Healing Environment

Primary Key Driver

Response: Positive Touch/Interactions

Secondary Drivers

Promote developmentally supportive positive touch

Encourage nurturing and developmentally appropriate feedings

Was the infant's first oral feeding experience from a parent/family member? ☐ Yes ☐ No

Mark the timing of each completed activity:	Within 3 DOL	4 - 7 DOL	> 7 DOL	Did Not Receive
Oral Care	☐	☐	☐	☐
Provided expressed breast milk (oral swabs and/or milk drops)	☐	☐	☐	☐

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Supporting Optimal Outcomes Through a Healing Environment

Primary Key Driver

Response: Positive Touch/Interactions

Secondary Drivers

- Promote developmentally supportive positive touch
- Encourage nurturing and developmentally appropriate feedings
- **Establish structures and systems that promote full family participation and partnership**

Which activities were completed with the Family Caregiver in collaboration with a therapist or trained team member? Check all that apply	☐ Setting individualized sensory/touch goals ☐ Providing anticipatory guidelines using structured tools (e.g., SENSE, Discharge Parent Pass, etc.) ☐ Other neuroprotective practices (Please specify: kangaroo care, music/voice therapy, scent cloths, light/sound regulation, PT/OT/SLP interventions): _____ ☐ None

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Data Collection: Types & Tools

Monthly Abstracted Patient Data

1

- **Inclusion Criteria:** Patients with a minimal 7-day NICU stay. Exclude deceased
- **Case Selection:** each month, abstract data from:
  - Up to **20 infants – 5 per birth weight category** (a) 2500 grams and above; b) 1500-2499 grams; c) 750-1499 grams; d) less than 750 grams)
  - Option to opt-out of smaller birth weight categories if less than 5 patients per quarter
- Use the **Patient-Level Form**

Patient-Level Data Collection Form

SOOTHE Initiative

Complete for up to 20 infants (see back for sampling instructions)

STUDY ID # _____ (start with 001 and number sequentially until the end of the initiative)

Patient Demographics

Discharge month _____
Discharge year _____

Length of stay _____ **days**
(count if patient was in bed at midnight)

Discharge to: ☐ Another hospital ☐ Home ☐ DCF

Primary caregiver preferred language ☐ English ☐ Creole ☐ Spanish ☐ Other: _____ ☐ Unknown

Primary caregiver race (check all that apply) ☐ Asian ☐ Black ☐ White ☐ Other: _____ ☐ Unknown

Primary caregiver ethnicity ☐ Hispanic ☐ Non-Hispanic ☐ Unknown

GA at birth (complete weeks only) _____

Birth weight (grams) _____

Type of insurance (check all that apply) ☐ Medicaid/Med. plans ☐ Private ☐ Self-pay ☐ Other: _____ ☐ Unknown

Inborn ☐ Yes ☐ No

Developmental and Supportive Care Activities

Mark the timing of each completed activity:	Within 3 DOL	4 - 7 DOL	> 7 DOL	Did Not Receive
Oral Care	☐	☐	☐	☐
Provided expressed breast milk (oral swabs and/or milk drops)	☐	☐	☐	☐
Skin-to-skin contact by family caregiver	☐	☐	☐	☐
Documented use of a validated positioning tool (e.g., IPAT)	☐	☐	☐	☐

Family Caregiver Involvement

Was the infant's first oral feeding experience from a parent/family member? ☐ Yes ☐ No

Regarding Family Caregiver training and inclusion in care, check only items with a documented date:

Family Caregiver:
☐ Received training on recognizing infant cues
☐ Demonstrated ability to recognize infant cues
☐ Received training on intentional, positive touch
☐ Demonstrated ability to respond with intentional, positive touch to infant cues
☐ None

Select Caregiver
☐ Mother ☐ Father ☐ Other_____
☐ Mother ☐ Father ☐ Other_____
☐ Mother ☐ Father ☐ Other_____
☐ Mother ☐ Father ☐ Other_____

Which activities were completed with the Family Caregiver in collaboration with a therapist or trained team member?
Check all that apply

☐ Setting individualized sensory/touch goals
☐ Providing anticipatory guidelines using structured tools (e.g., SENSE, Discharge Parent Pass, etc.)
☐ Other neuroprotective practices (please specify: kangaroo care, music/voice therapy, scent cloths, light/sound regulation, PT/OT/SLP interventions): _____
☐ None

Primary caregiver SDOH/HRSN screening was: ☐ Positive ☐ Negative ☐ Declined ☐ Not documented

Skin Management

Check any skin conditions documented throughout the entirety of the infant's NICU stay:

☐ Pressure injuries
☐ Medical Adhesive-Related Skin Injury (MARSI)
☐ CPAP-related injuries
☐ Other non-surgical open wound: _____
☐ None

Number of Laboratory Test Results (see details on back)

Total # _____

Hematology # _____ **Chemistry #** _____

Coagulation # _____ **Blood Gases #** _____

Demographics

Developmental and Supportive Care Activities

Family Caregiver Involvement

Avoiding Noxious Stimuli

Process to Collect and Submit Your Data

1

Identify Cases

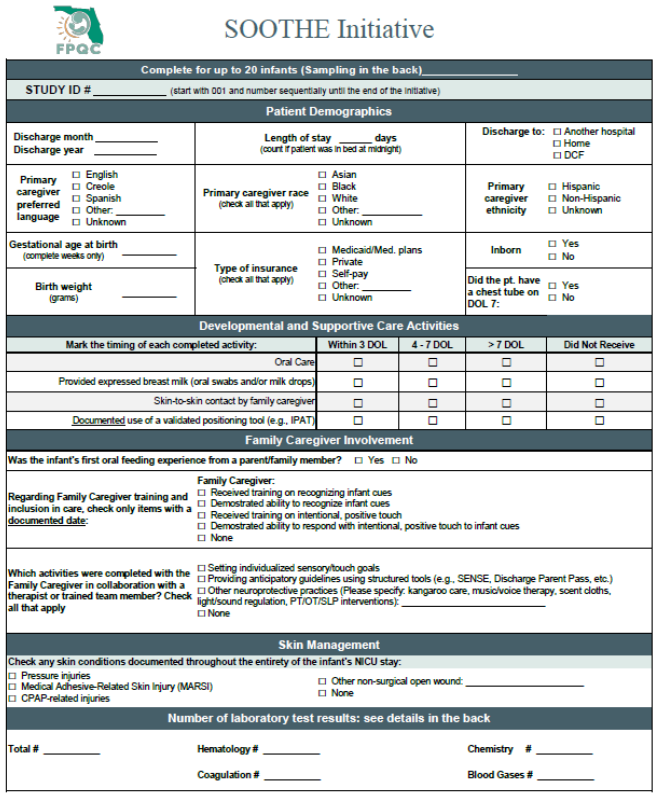
Number of discharges/month

If category has 10 or more : 5 systematically selected infants

If less than 10 discharges: First 5 infants

2

Abstract medical record



SOOTHE Initiative

Complete for up to 20 infants (Sampling in the back)

STUDY ID # _____ (start with 001 and number sequentially until the end of the initiative)

Patient Demographics

Discharge month _____ Discharge year _____	Length of stay _____ days (count if patient was in bed at midnight)	Discharge to: ☐ Another hospital ☐ Home ☐ DCF
Primary caregiver preferred language ☐ English ☐ Creole ☐ Spanish ☐ Other: _____ ☐ Unknown	Primary caregiver race (check all that apply) ☐ Asian ☐ Black ☐ White ☐ Other: _____ ☐ Unknown	Primary caregiver ethnicity ☐ Hispanic ☐ Non-Hispanic ☐ Unknown
Gestational age at birth (complete weeks only) _____	Type of insurance (check all that apply) ☐ Medicaid/Med. plans ☐ Private ☐ Self-pay ☐ Other: _____ ☐ Unknown	Inborn ☐ Yes ☐ No
Birth weight (grams) _____		Did the pt. have a chest tube on DOL 7: ☐ Yes ☐ No

Developmental and Supportive Care Activities

Mark the timing of each completed activity:	Within 3 DOL	4 - 7 DOL	> 7 DOL	Did Not Receive
Oral Care	☐	☐	☐	☐
Provided expressed breast milk (oral swabs and/or milk drops)	☐	☐	☐	☐
Skin-to-skin contact by family caregiver	☐	☐	☐	☐
Documented use of a validated positioning tool (e.g., IPAT)	☐	☐	☐	☐

Family Caregiver Involvement

Was the infant's first oral feeding experience from a parent/family member? ☐ Yes ☐ No

Regarding Family Caregiver training and inclusion in care, check only items with a documented date:
Family Caregiver:
☐ Received training on recognizing infant cues
☐ Demostrated ability to recognize infant cues
☐ Received training on intentional, positive touch
☐ Demostrated ability to respond with intentional, positive touch to infant cues
☐ None

Which activities were completed with the Family Caregiver in collaboration with a therapist or trained team member? Check all that apply
☐ Setting individualized sensory/touch goals
☐ Providing antipatory guidelines using structured tools (e.g., SENSE, Discharge Parent Pass, etc.)
☐ Other neuroprotective practices (Please specify: kangaroo care, music/voice therapy, scent cloths, light/sound regulation, PT/OT/SLP interventions): _____
☐ None

Skin Management

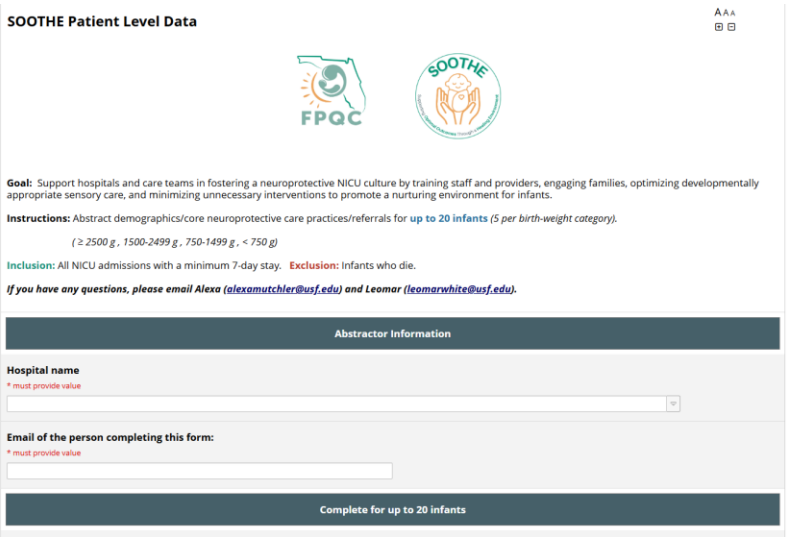
Check any skin conditions documented throughout the entirety of the infant's NICU stay:
☐ Pressure injuries
☐ Medical Adhesive-Related Skin Injury (MARSI)
☐ CPAP-related injuries
☐ Other non-surgical open wound: _____
☐ None

Number of laboratory test results: see details in the back

Total # _____ Hematology # _____ Chemistry # _____
Coagulation # _____ Blood Gases # _____

3

Enter data in the REDCap data portal



SOOTHE Patient Level Data

Goal: Support hospitals and care teams in fostering a neuroprotective NICU culture by training staff and providers, engaging families, optimizing developmentally appropriate sensory care, and minimizing unnecessary interventions to promote a nurturing environment for infants.

Instructions: Abstract demographics/core neuroprotective care practices/referrals for up to 20 infants *(5 per birth-weight category).*

(≥ 2500 g , 1500-2499 g , 750-1499 g , < 750 g)

Inclusion: All NICU admissions with a minimum 7-day stay. **Exclusion:** Infants who die.

If you have any questions, please email Alexa (alexamutchler@usf.edu) and Leomar (leomarwhite@usf.edu).

Abstractor Information

Hospital name
* must provide value

Email of the person completing this form:
* must provide value

Complete for up to 20 infants

Link will be sent to the project and data lead once DUA is fully executed

Quarterly Hospital-Level Data

2

- Policies and Guidelines to Support SOOTHE
- Standardized Documentation
- Sound Levels
- Staff training

- Use the Hospital-Level Data Collection Form

Structural Measures

These measures help us to assess where your facility is on implementation within our Initiative.

1 - Not Started
2 - Planning/Developing
3 - Started Implementing - Started implementing in the last 3 months
4 - Implemented - Less than 80% compliance after at least 3 months of implementation (not routine practice)
5 - Fully Implemented - At least 80% compliance after at least 3 months of implementation (routine practice)

To what extent has your hospital:	Not Started	Planning/ Developing	Started to Implement	Implemented	Fully Implemented
Implemented a reading program to promote a language-rich environment through shared reading (books and tools available) and engaging families in early communication with the infant?					
Implemented a policy, guideline, and/or procedure for routine use of evidence-based calming sounds (e.g., white noise, lullabies, or recorded parent voice) within recommended noise limits (≤ 45 DBA) with an audio device available to support this practice?					
Implemented written lighting guidelines that include gestational age-appropriate dimming, light cycling for infants ≥ 32 weeks GA, and special population guidance (e.g., procedures, ELBW, Golden Hour, and transitions)?					
Implemented a scent cloth program to promote soothing smell and parent-infant bonding, to include: 1. clean scent cloths available to families, 2. guidance on safe use given to staff and caregivers, and 3. inclusion of program in unit policies or care routines?					
Implemented a policy, guideline, and/or procedure to reduce negative taste and smell experiences? Policy should include the use of unscented products for premature infants and an annual inventory and monitoring strategy to assess scented product use in the NICU, including perfumes used by staff.					
Implemented written guidelines on optimizing central line use, including the maximum number of IV placement attempts by a single clinician and the use of a specialized team for central line placement?					
Implemented written guidelines for pre- and post-procedural pain management, including pharmacologic and non-pharmacologic comfort measures?					
Implemented a process for conducting and documenting procedure time-outs or huddles prior to invasive procedures, integrated into the chart or flowsheet?					
Implemented a process, guideline, and/or protocol to avoid duplicate or redundant tests?					
Implemented written guidance on parents holding the infant during and after enteral feedigns once infant becomes eligible?					
Engaged a Patient Advisor in the QI team?					

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Sound Levels in the NICU

Daily Spot Checks

- Measure sound levels in the NICU (in **decibels**)
- Conduct **within the 2-hour quiet time**
  - Once during **day shift**
  - Once during **night shift**

Reporting

- Record **monthly averages** for each quarter
- Use FPQC's **daily tracking spreadsheet**

Goal: Decrease your unit baseline

Staff Training

A. Developmentally Appropriate Care Practices

- Environmental noise in the NICU
- Midline flexion with 360-degree containment
- Safe sleep modeling
- Developmentally supportive infant handling and transfers

Staff Training

B. Minimizing Stress or Pain

- Unit's central line use and guideline
- Stress cue recognition and setting intention before physical contact
- Pain recognition using a standardized pain management scale

Report Staff Training Separately

What % of your staff has received education on…	Nurses	Physicians	Therapists
A. Developmentally appropriate care practices: - Environmental noise in the NICU - Midline flexion with 360-degree containment (including positioning guidelines, use of a validated positioning tool such as IPAT, observation, and supervised practice) - Safe sleep modeling (e.g., "Clear the Crib" practice) - Developmentally supportive infant handling and transfers (simulation, bedside observation, direct assistance), including the "two-person care" or "four-handed care" framework	_____ %	_____ %	_____ %
B. Minimizing stress or pain - Unit's central line use and guideline - Stress cue recognition and setting intention before physical contact (clear purpose, pre-arranging supplies, clustering care) - Pain recognition using a standardized pain management scale	_____ %	_____ %	_____ %

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Reporting Schedule

Baseline Data - ***Due January 15th***

- Abstracted Patient-Level Data: October – December 2025
- Simplified Hospital-Level Data: October – December 2025

Active Phase - ***Starts January 1st***

- Abstracted Patient-Level Data: Collected ***monthly***, due on the 15th of the following month
  - *E.g., January data due February 15th*
- Hospital-Level Data: Collected ***quarterly***, due on the 25th of the month following the quarter
  - *e.g. Q1 (January – March) due April 25th*

Sample Reports

Sample Report

Attendance at Coaching Calls

Coaching Call Attendance

100%

Total # of Coaching Calls Attended	Total # of Coaching Calls
3	3

Your Hospital
Has Presented
Their PDSA This Quarter

Abstracted Patient-Level Data
Due monthly

Most Recent Patient-Level Submission

April 2026

Total # of Months Submitted	Total # of Months Due
5	6

Your patient-level baseline data Oct-Dec 2025 is:
Submitted

Hospital-Level Data
Due quarterly

Most Recent Hospital-Level Submission

Baseline (Oct-Dec 2025)

Total # of Quarters Submitted	Total # of Quarters Due
1	2

Your hospital-level baseline data Oct-Dec 2025 is:
Submitted

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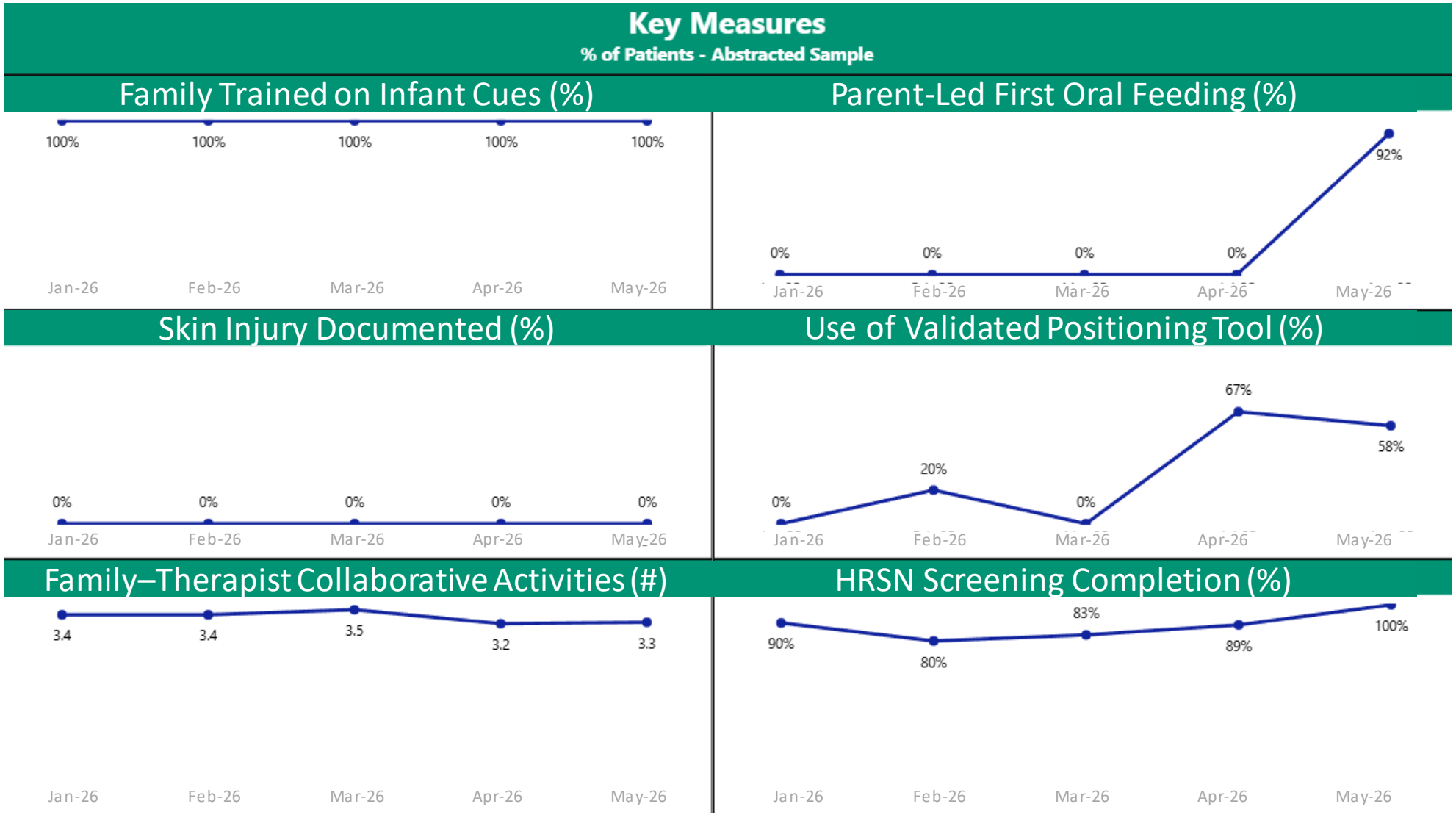
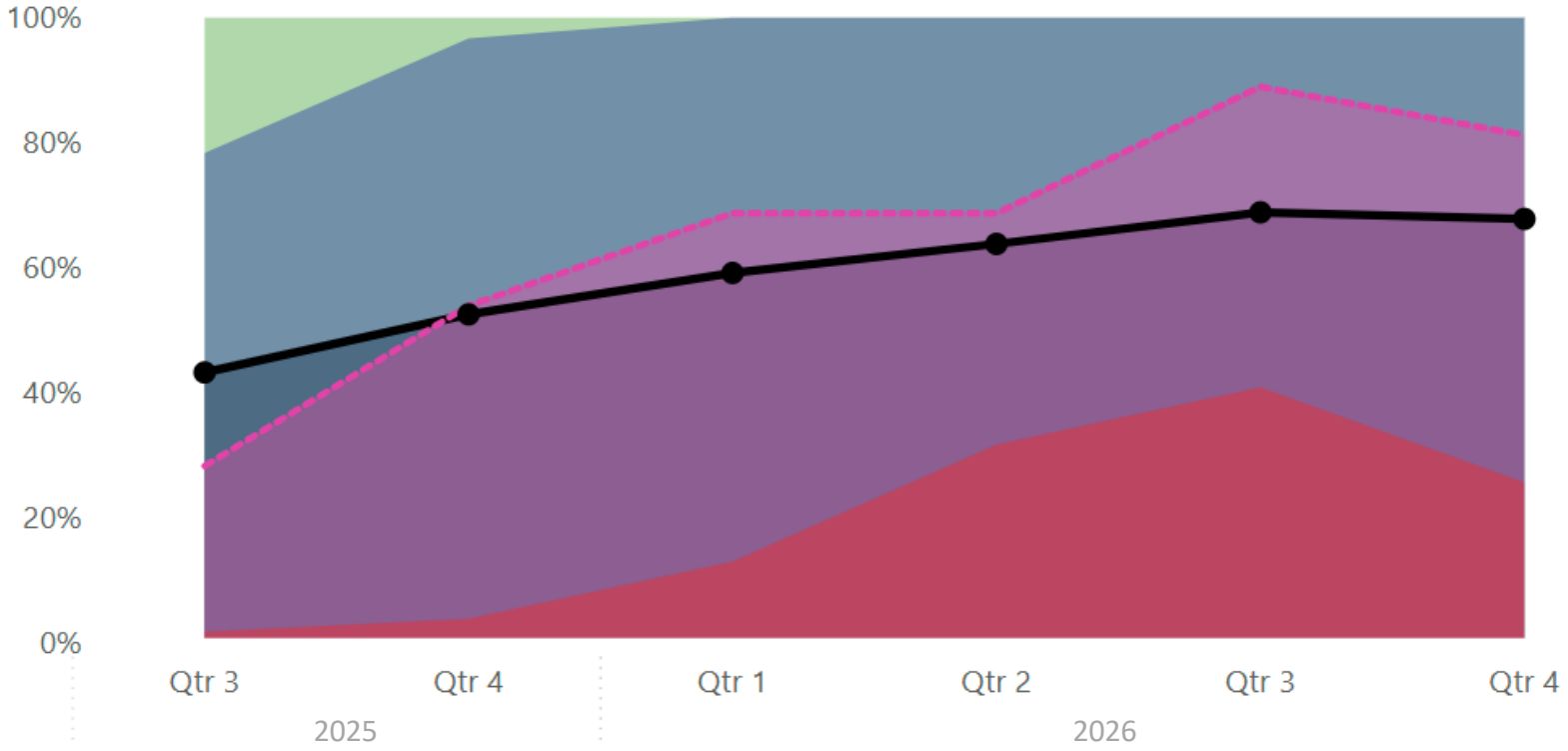
Sample Report



Sample Report

% of infants who had their first oral experience from a parent/family member



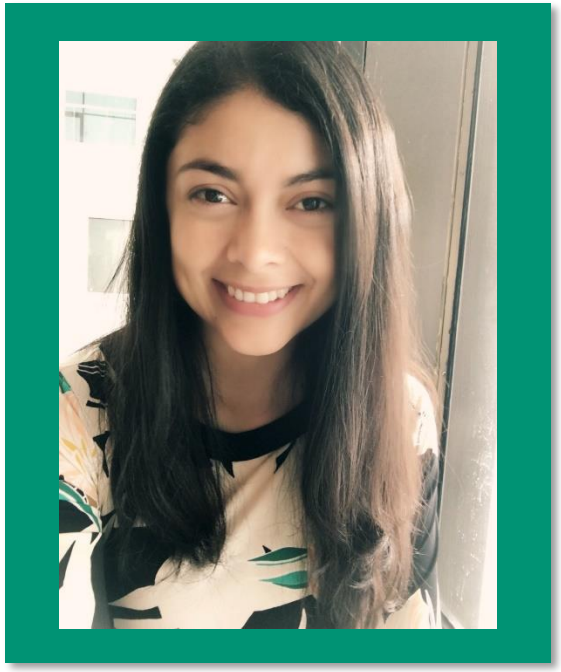
Year	2025		2026			
	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4
# of patients	838	1061	1074	1176	1123	779
% First Oral Experience by Parent	43%	52%	59%	64%	69%	68%

QI MONTHLY CYCLE

QI REPORTS

- Aim
- Run Charts
- Tracks Process, Structural, and Outcome Measures
- Add your PDSAs

Meet the Data Team



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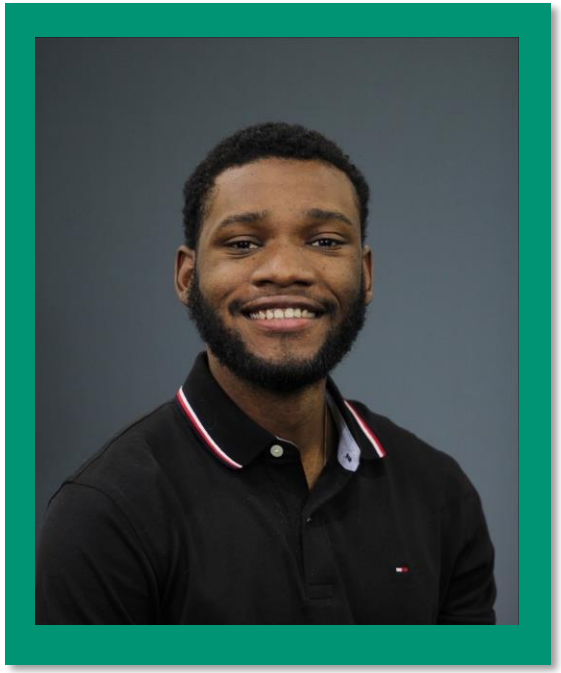

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IMPORTANT REQUESTS

- ❑ Track completion of your hospital's Data Use Agreement (DUA)
- ❑ Let us know of any changes in your team: data lead resources
- ❑ Attend the data webinar on **Wednesday, October 29 @ 2:00pm**

Register here:

Questions?

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www.fpqc.org

Florida Perinatal
Quality Collaborative