PDSA WORKSHEET

Cycle: 1.1
Duration for test: 2 weeks

Project SMART aim: By 6/2023, ≥60% (a 20% improvement from our baseline of 50%) of infants admitted to our NICU will receive skin-to-skin care from at least one family caregiver within 3 days of clinical eligibility[1].
[1] Clinical eligibility is defined by individual NICU protocols.

Objective of this cycle *(What are we trying to accomplish?)***:** Including family caregivers in daily bedside rounds will result in more education on how to be active participants in the care of their infant and potentially increase direct care opportunities such as the number SSC care episodes experienced.

What key driver does this change impact? Participation of family in care

PLAN

What changes can we make that will lead to improvement?

Describe changes we plan to test
Use verbal (e.g., conversation prompt during rounds or via phone/virtual meeting) and nonverbal (e.g., SSC flyer) cues to intentionally include family caregivers in daily bedside rounds.

Who are stakeholders for this cycle?
Family caregivers, Providers (Nurse Practitioner, Attending, Fellow), Nurses, Admin (printing flyers), IT (telemedicine part), RT (on board with process), Social workers (address barriers), Developmental specialists

Tasks needed to implement these changes *(How will we make this change happen?)*

Task	Who is responsible *Consider locations the changes will affect*	Due date
Develop & receive feedback on flyer. Flyer should include information on SSC care, timeframe of daily AM rounds, & instructions on how to join rounds virtually.	Nurse*, Caregiver	1 week
Provide education to NICU staff re: SSC guideline, importance of including family caregivers in daily rounds, & standardized verbal/nonverbal prompts (providers, nurses, RT, social work, developmental specialists)	Fellow*, Nurse*, RT*, Social work*, Developmental specialist*	1 month
Develop & test process for virtual rounds with family caregivers who are unable to be physically present for daily rounds (includes troubleshooting IT, security, & patient privacy issues with the hospital)	MD*, Caregiver	2 weeks
Develop visual reminder of standardized verbal prompt to intentionally include family caregivers in daily bedside rounds (e.g., card on rounding computers) & visually display them (e.g., rounding computers, workrooms). *Examples: Have you had the chance to experience SSC care with your baby yet? Is there anything we can do to help you and your baby have a SSC care experience? What questions do you have about SSC care?*	MD*, Caregiver	1 week
Create awareness about NICU's consensus guideline outlining how to provide SSC care.	Nurse*, MD*, RT*	2 weeks

*Listed stakeholder who is ultimately responsible for reporting to core team.

Adapted from FPQC QI Boot camp "PDSA" worksheet and IHI (www.ihi.org)

Measures for this cycle *(How will we know that a change is an improvement)*

Consider: balancing measures, measures to determine whether the prediction succeeds, and your goal is achieved, how data will be collected & who is responsible for collecting data. You may find it easier to cut and paste from your measurement grid.

OUTCOME measure	Description	Baseline	Goal
Percentage of infants receiving prompt initiation of SSC[a]	Numerator: # of qualifying infants who receive SSC from at least one family caregiver within 3 days of clinical eligibility as defined by individual unit protocols. Denominator: Total # of qualifying infants.	20%	≥60%
Average day of life when SSC was first provided by a family caregiver[a]	Numerator: Total # of days of life of qualifying infants' first episode of SSC by family caregiver. Denominator: Total # of qualifying infants.	7 days	≤3 days
Percentage of eligible inpatient days where a family caregiver provided at least one hour of SSC[a]	Numerator: # of days during which a qualifying infant received at least one hour of SSC from a family caregiver. Denominator: # of inpatient days after which the infant was first eligible to start receiving SSC (date of final disposition minus date of SSC eligibility)	20%	≥50%

[a] Reported to FPQC

PROCESS measure	Description	Baseline	Goal
Non-verbal reminder audits	Numerator: # of qualifying infants with SSC care/rounding flyer posted on the patient information board Denominator: Total # of qualifying infants. Audits to occur 3 days each week with a "secret shopper" (e.g., charge nurse, registered dietician, or pharmacist) who uses a tally sheet to capture data.	0%	≥90%
Use of verbal cues	Numerator: # of qualifying infants where NICU medical team used the standardized verbal prompt (or a variation of it) to intentionally include family caregivers in daily bedside rounds Denominator: Total # of qualifying infants. Audits to occur 3 days each week with a "secret shopper" (e.g., charge nurse, registered dietician, or pharmacist) who attends rounds and uses a tally sheet to capture data.	0%	≥90%
Family caregivers physically present for rounds	Numerator: # of family caregivers physically present during daily bedside rounds with the medical team Denominator: # of qualifying infants	Unknown	≥50%

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Family caregivers virtually present for rounds	Numerator: # of family caregivers present virtually during daily bedside rounds with the medical team Denominator: # of qualifying infants whose parents have consented to participate in virtual rounds & provided contact information	Unknown	≥50%
Staff education	Numerator: # of stakeholders who received education re: SSC guideline, importance of including family caregivers in daily rounds, & standardized verbal/nonverbal prompts Denominator: Total # of stakeholders who care for NICU infants. Stakeholders include providers, nurses, RT, social work, developmental specialists	0%	≥80%
Caregiver engagement during rounds	Numerator: # of qualifying infants whose family caregivers asked at least 1 question to the medical team when asked "What questions do you have?" Denominator: Total # of qualifying infants with a caregiver who attended rounds (physically or virtually) and where the medical team asked "What questions do you have?" Audits to occur 3 days each week with a "secret shopper" (e.g., charge nurse, registered dietician, or pharmacist) who attends rounds and uses a tally sheet to capture data.	Unknown	≥25%
Qualitative feedback from staff & family caregivers using an anonymous 2 question survey. Question 1: What did you like about this process? Question 2: What could have been done better with this process?			

BALANCING measure	Description	Baseline	Goal
Percentage of unplanned extubations associated with SSC among SSC episodes[a]	Numerator: # of unplanned extubations that occurred during transfers or during SSC at final disposition. Denominator: Total # of episodes of SSC at final disposition.	unknown	≤20% change from baseline
Percentage of other documented unplanned events associated with SSC[a]	Numerator: # of SSC episodes during which a documented adverse health event* other than extubation occurred including significant desaturation, apnea or bradycardia[1]; hypothermia[2]; or line dislodgement at final disposition[3]. Denominator: Total # of episodes of SSC at final disposition. *Adverse health event definition:* *[1] Significant desaturation/apnea/bradycardia which requires early termination of SSC per unit guideline* *[2] Hypothermia - temp < 36.5 at any time during or immediately after SSC* *[3] Line dislodgement - loss of line or subsequent malfunction or malposition of line*	unknown	≤20% change from baseline
Duration of daily bedside rounds	Average duration in minutes from time rounds starts to time rounds stop (rounded to nearest minute).	Unknown	≤20% change from baseline

[a] Reported to FPQC

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DO

What happened when the test was conducted?

Was the cycle carried out as planned (yes, no)**?** Yes

OUTCOME measure	Baseline	Goal	This cycle
Percentage of infants receiving prompt initiation of SSC[a]	20%	≥60%	25%
Average day of life when SSC was first provided by a family caregiver[a]	7 days	≤3 days	5 days
Percentage of eligible inpatient days where a family caregiver provided at least one hour of SSC[a]	20%	≥50%	30%

PROCESS measure	Baseline	Goal	This cycle
Non-verbal reminder audits	0%	≥90%	75%
Use of verbal cues	0%	≥90%	60%
Family caregivers physically present for rounds	Unknown	≥50%	20%
Family caregivers virtually present for rounds	Unknown	≥50%	5%
Staff education	0%	≥80%	90%
Caregiver engagement during rounds	Unknown	≥25%	40%

BALANCING measure	Baseline	Goal	This cycle
Percentage of unplanned extubations associated with SSC among SSC episodes[a]	Unknown	≤20% change from baseline	1
Percentage of other documented unplanned events associated with SSC[a]			0
Duration of daily bedside rounds			125 minutes

What did you observe (i.e., qualitative feedback from the team)**?**

- It seemed to take a lot of time to connect with family caregivers virtually. This time gap was shortened by ensuring the rounding provider had the caregiver's contact information before rounds, the registered dietician was assigned the responsibility of calling the caregiver of "next patient" while the medical team recapped plans with the nurse and caregiver of the "current patient".
- Family caregivers appreciated being asked questions. Staff subjectively felt more family caregivers asked questions of the medical team when invited to do so (i.e., "What questions do you have?). Providers felt there were less call backs from family caregivers re: daily plan of care.
- Verbal and nonverbal cues seemed to increase the number of family caregivers who engaged with rounds. Family caregivers were appreciative of being able to virtually engage with the team, especially when they had to go back to work.
- Providers liked the card on computers reminding them to prompt family caregivers to participate in rounds.

What did you observe that was not part of the plan?

- It was challenging for family caregivers to hear us clearly if the computer microphone was used. This improved when an iPAD or a portable computer camera/microphone was used.
- Caregiver feedback helped improve phrasing of the standardized verbal cue used.
- Staff found it difficult to find copies of the flyer and often forgot to post it. Staff suggested including the flyer as part of the standard admission packet/process and creating awareness about the flyer/process during staff huddles.
- Flyers need to be translated and available in Spanish.
- An unplanned extubation occurred. Need to interview RN and RT who were present to identify opportunities for improvement.

STUDY

Did the measured results and observations meet your objective?

Was your goal achieved (yes, no)**?** No.

How do results of this test compare to previous performance? There is some improvement in outcome and process measures.

If YES

- **Do you plan to expand the test** (yes, no)**?** Yes
- **Will you expand the scale** (i.e., keep the same conditions, just test more)**?**
- **Will you expand the scope** (i.e., change the conditions)**?**
- **Will you expand the scale and scope** (i.e., change locations/units and conditions)**?** Test more patients and make improvements in the below areas (PDSA 1.2):
    1. Outline roles and responsibilities for rounding team members for virtual/in-person caregiver communications (e.g., who calls parent, who confirms contact information, etc.)
    2. Ensure each rounding team has access to a NICU iPAD with stand to improve audio-visual communication during virtual rounding.
    3. Revise visual prompt on rounding computers to include caregiver suggesting phrasing.
    4. Make Spanish version of flyer and include flyers in NICU admission packets.
    5. Investigate unplanned extubation.

~~If NO~~

- ~~**What data do you have to distinguish if your method of testing the change failed or if the designed change was not effective?**~~

Were there any barriers with the cycles' implementation (yes, no)**?** Yes. See above observations.

What else did you learn? Listed above.

ACT

Decide to Abandon, Adapt, or Adopt?

	ABANDON: Discard change idea testing. Describe what you will change.
x	**ADAPT:** Select changes to implement on & try a new one
	ADOPT: Improve the change & continue a larger scale. Develop an implementation plan for sustainability.

Helpful resources

See examples of SSC pamphlets in the **Encouraging Family Participation in Early SSC** section of the PAIRED Initiative Toolbox https://health.usf.edu/publichealth/chiles/fpqc/paired/toolbox