CUE-BASED FEEDING

Goal

The purpose of this educational program is to implement a Cue-based Feeding (CBF) protocol at SMH NICU. This course will educate the staff on the importance of cue-based feeding and how to develop the skills needed to assess and recognize infant feeding cues. This will facilitate individualized cue-based feeding methods for infants in order to produce improved health outcomes.

Learning Objectives

At the end of this course, the staff will be able to:

- Define Cue-based Feeding (CBF).
- State the purpose and benefits of CBF.
- Compare CBF and Ad Lib feeding.
- Identify feeding cues, readiness, signs of hunger, and CBF criteria.
- Name the staff involved in the CBF process.
- Explain and apply the CBF protocol.
- Demonstrate proper CBF documentation.

Oral feeding is the first developmental milestone premature infants must achieve, and is a requirement for discharge from the NICU.

Cue-based Feeding

The progression of oral feeding for each individual infant based on their developmental cues and demonstration of feeding readiness.

Benefits

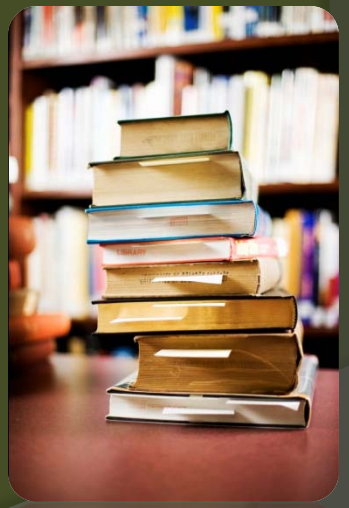
- Earlier achievement of full oral feedings.
- Earlier discharge from the NICU/Hospital.
- Decreased health care costs.
- Improved overall health outcomes.

Evidence-based

“Several studies have come out to support that a cue-based feeding approach, also known as an infant-driven approach, may help the NICU infant achieve full oral feedings up to 6 days sooner than a scheduled feeding method" (Newland, 2012, p. S41).

Evidence-based

Literature and evidence-based research reports that cue-based feeding in the NICU can result in shortened time of admission and decreased parenteral IV nutrition and decrease associated risk factors such as infection, hyperbilirubinemia, and liver disease.



SMH NICU Current Practice

- NPO
- Scheduled
- Volume Controlled
- Medical Staff Driven
- Preterm Infant Care Map

Preterm Infant Care Map

Aspect of Care	32-33 weeks	34-37 weeks
Nutrition	Non nutritive sucking Nipple Q day- ↳ as tolerated	Nipple all feeds. At 1700 grams change to 22 calorie formula at 100-160 ml/kg/day. May attempt to breast feed

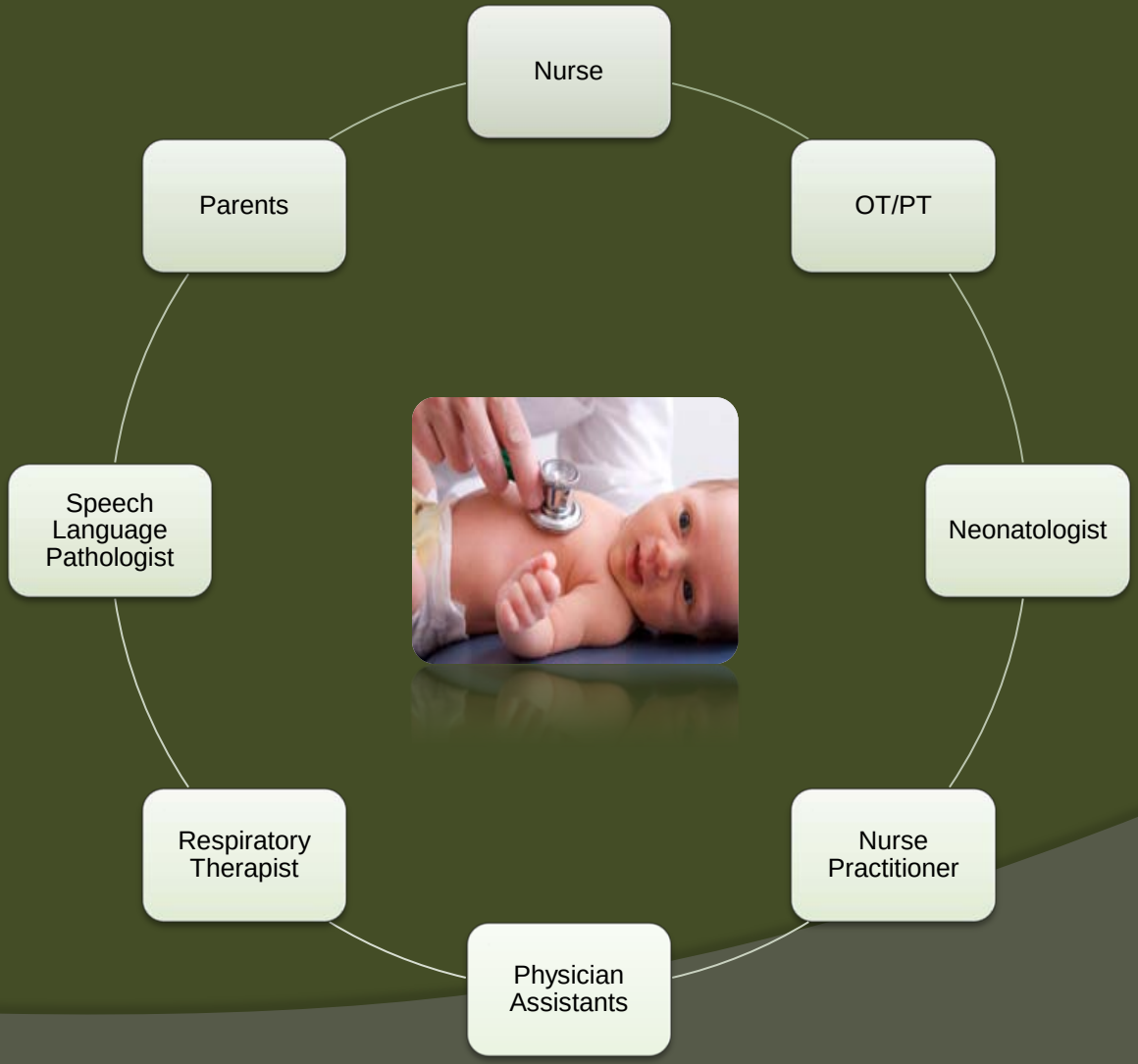
Cue-based vs. Ad Lib

Cue-based Feeding	Ad Lib Feeding
Premature Infants	Full term Infants
Infant driven	Infant driven
Time, volume and frequency restrictions	No restrictions

Who Decides?

In a cue-based feeding approach, the bedside nurse determines if an infant is ready for oral feeds using their knowledge and skills to assess feeding readiness and input from the multidisciplinary team.

Multidisciplinary Approach



Getting Started

Initiate Cue-based Feeding At:

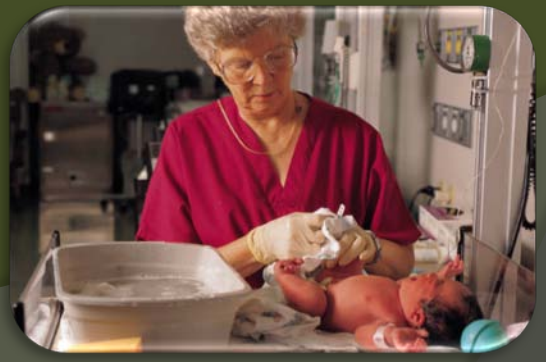
- 32 weeks

- This is a standard of care and **does not** require a physician's order!

- Physician order example:
  - 30 ml's Q 3 PO/OG

Criteria

- Regulate temperature
- Sustain a state of alert awake behavior
- Cardio-respiratory stability
- Coordination of suck, swallow, and breathing (SSB)



Exceptions

- Preemies will not meet all criteria at the same time and may not meet certain criteria such as regulate temperature or coordination of SSB.
- If this is they case, they can start to PO feed.
- Think of the 32-33 weeker who nipples like a champ, but is to small to regulate their temperature in an open crib.

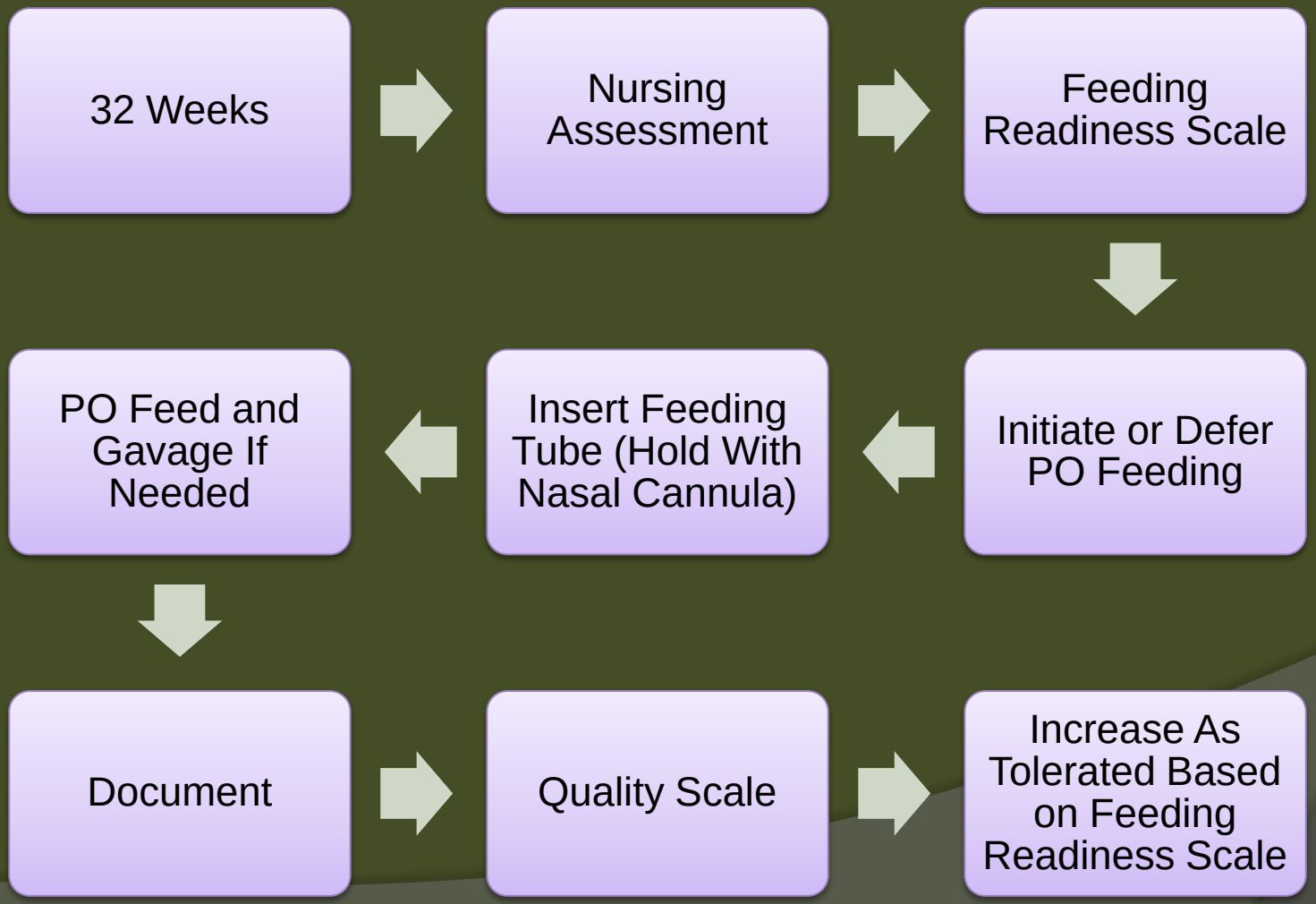
Feeding Cues, Signs of Hunger, and Feeding Readiness

- Moving extremities and head
- Moving hands onto face or mouth
- Moving the face against bed linens or hands
- Mouthing or sucking movements

Cue-based Feeding

For infants that are able to nipple feed, cue-based feeding uses the babies own signals of hunger and willingness and ability to nipple to determine individualized developmentally supportive care and feeding methods instead of being forced feed.

SMH NICU Cue-based Feeding Protocol



Feeding Readiness Scale

Infant Activity	Score
Alert or fussy prior to care. Rooting and/or hands to mouth behavior. Good tone	1
Alert once handled. Some rooting or takes pacifier. Adequate tone.	2
Briefly alert with care. NO hunger behaviors. (i.e. rooting, sucking). Adequate tone	3
Sleeping throughout care. No hunger cues. No change in tone.	4
Significant HR, RR, O2, or WOB outside of baseline.	5

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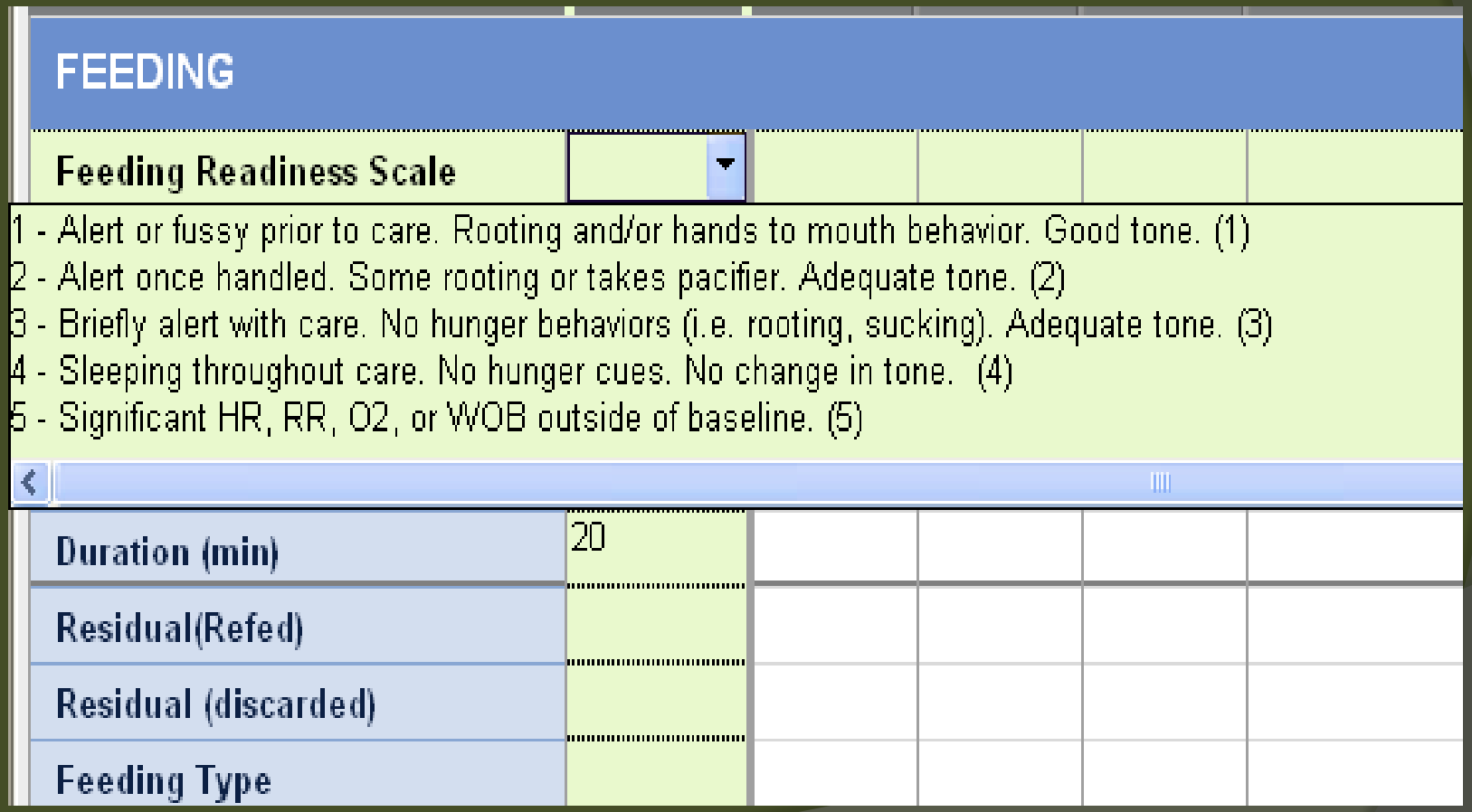
FEEDING
Feeding Readiness Scale
1 - Alert or fussy prior to care. Rooting and/or hands to mouth behavior. Good tone. (1)
2 - Alert once handled. Some rooting or takes pacifier. Adequate tone. (2)
3 - Briefly alert with care. No hunger behaviors (i.e. rooting, sucking). Adequate tone. (3)
4 - Sleeping throughout care. No hunger cues. No change in tone. (4)
5 - Significant HR, RR, O2, or WOB outside of baseline. (5)
Duration (min)
20
Residual(Refed)
Residual (discarded)
Feeding Type

Scoring

Score	Intervention
1-2	Ready to PO Feed Gavage rest of feed via NG/OG tube prn if unable to complete PO
3-5	Gavage Feed Offer non-nutritive sucking Assess for feeding readiness every feeding

Monitoring

- PO feeding tolerance and progress
- Changes in clinical status
- Weight gain or loss
- Increasing fatigue or pooping out

Break Time

There is nothing wrong with giving them a break.
Just look for their “cues”.

An infant will have either taken the prescribed volume or the nurse will decide on whether to stop the feeding based on certain factors.

“Decisions to “stop” are based on physiologic instability, lack of engagement in feeding, inefficient effort, and/or difficulty integrating suck-swallow breathe combinations despite caregiver efforts” (Ross & Philbin, 2011, p. 355).

Gavage

- Insert feeding tube via NG or OG
- OG if on Nasal Cannula or for any other reasons that clinically contraindicate an NG tube.
- Use smaller French tubes for NG.
- Gavage rest of feed via NG/OG tube prn if unable to complete PO

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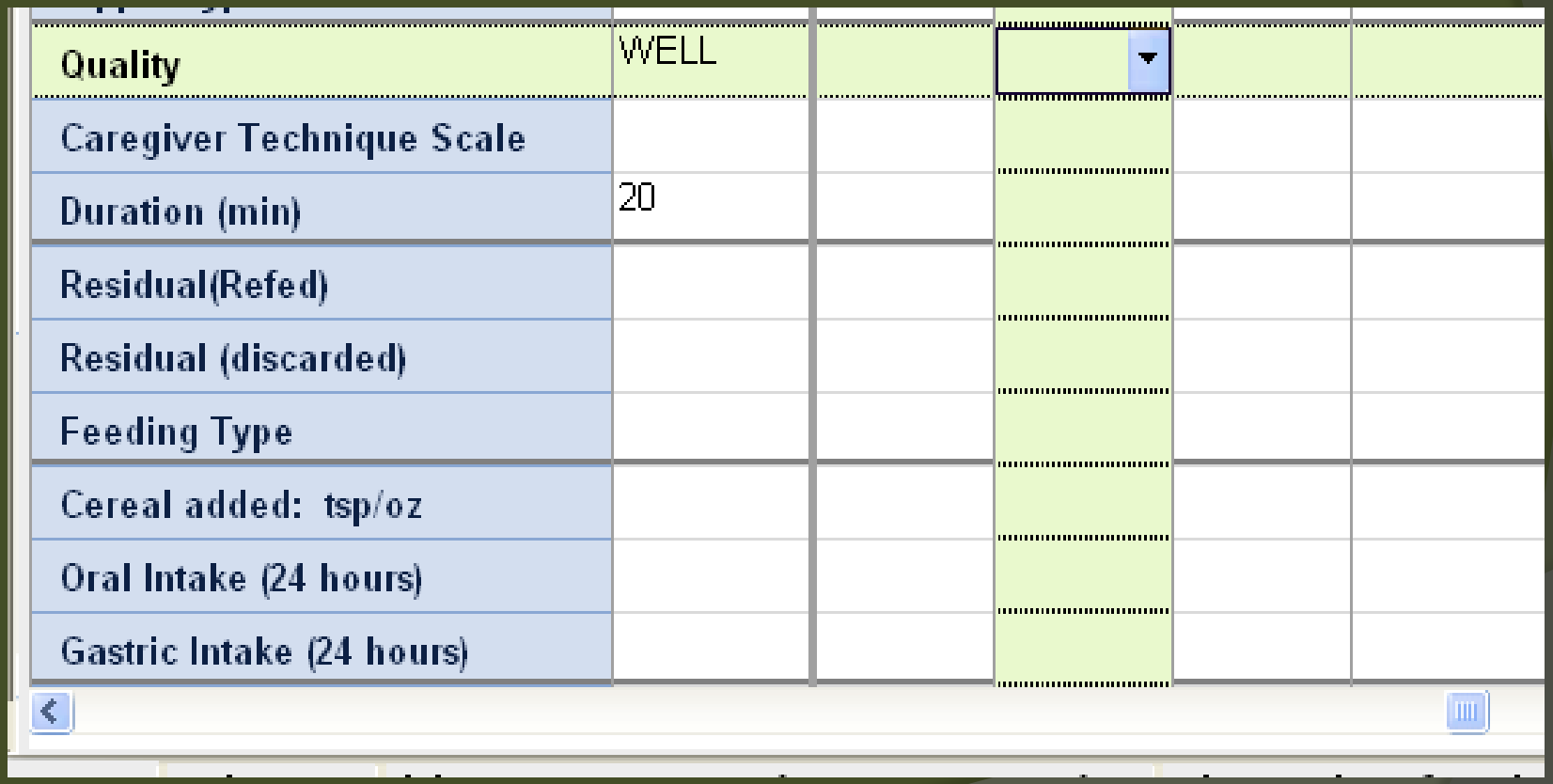

Quality	WELL				
Caregiver Technique Scale					
Duration (min)	20				
Residual(Refed)					
Residual (discarded)					
Feeding Type					
Cereal added: tsp/oz					
Oral Intake (24 hours)					
Gastric Intake (24 hours)					

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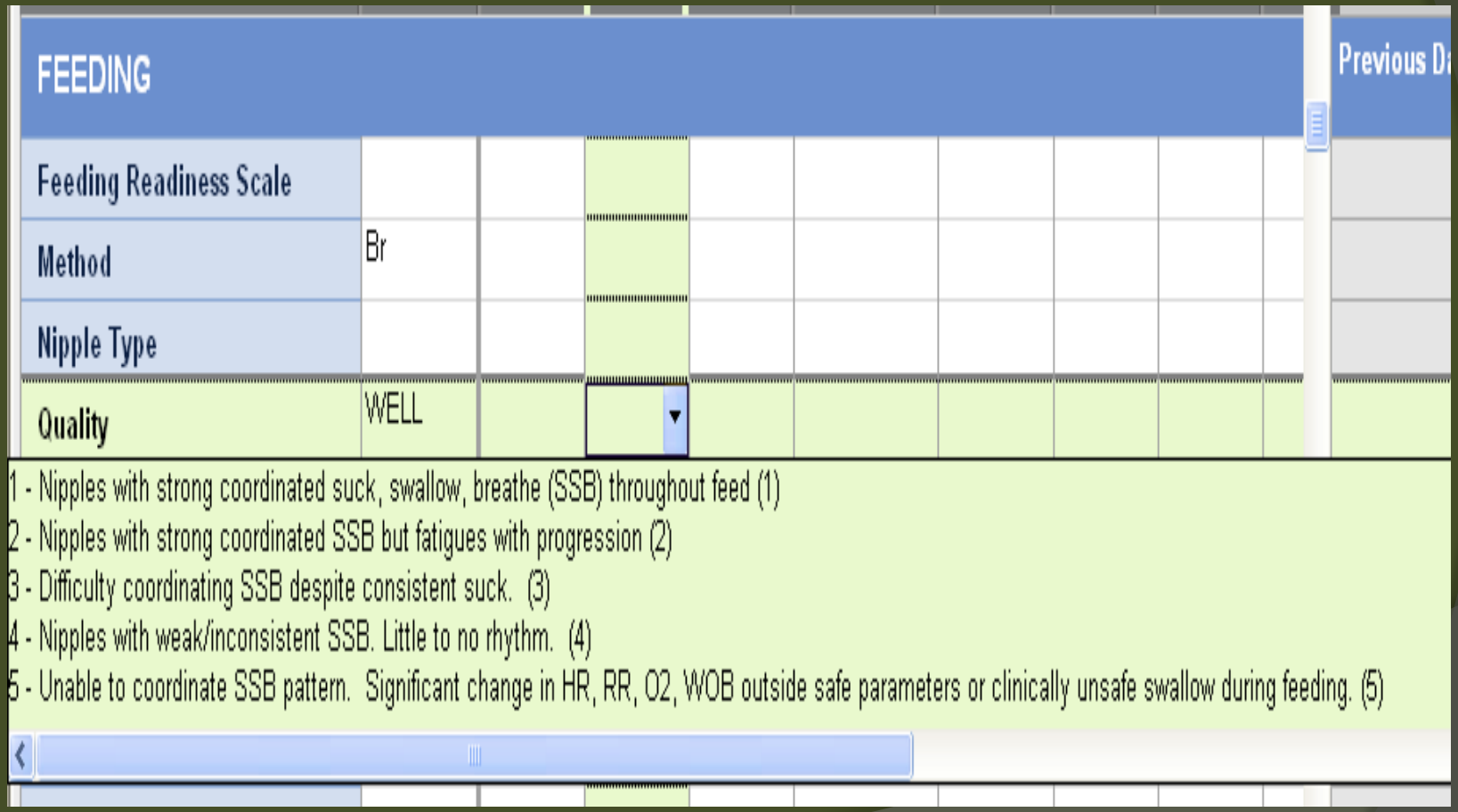
FEEDING
Previous Da
Feeding Readiness Scale
Method
Br
Nipple Type
Quality
WELL
1 - Nipples with strong coordinated suck, swallow, breathe (SSB) throughout feed (1)
2 - Nipples with strong coordinated SSB but fatigues with progression (2)
3 - Difficulty coordinating SSB despite consistent suck. (3)
4 - Nipples with weak/inconsistent SSB. Little to no rhythm. (4)
5 - Unable to coordinate SSB pattern. Significant change in HR, RR, O2, WOB outside safe parameters or clinically unsafe swallow during feeding. (5)

Assessing Quality

Quality Scale	Score	Interpretation
Nipples with strong coordinated suck, swallow, breathe (SSB) throughout feeding	1	No issues during feeding. Similar to that of a good full-term infant feeder .
Nipples with strong coordinated SSB but fatigues with progression	2	Starts off well but will poop out or fall asleep before the feeding is complete.
Difficulty coordinating SSB despite consistent suck	3	Notable milk spillage and trouble with self-pacing. Infants think they are good PO feeders but are not.
Nipples with weak/inconsistent SSB. Little to no rhythm	4	Requires breaks during feeding. Lacks maturation or organization for efficient PO feeding.
Unable to coordinate SSB pattern. Significant change in HR, RR, O2, WOB, outside safe parameters or clinically unsafe swallow during feed	5	Large amounts of milk spillage, tachypnea, and bradycardia. Feeding stopped due to instability.

Success

- Use your nursing judgment.
- Assess feeding readiness every touch time.
- Don’t be afraid to PO feed preemies.
- Ask for help if you are not comfortable.

Success

- Document accurately.
- Communicate feeding progress and outcomes with health care team.
- Advocate for your patients; The longer you delay PO feeds the longer you are keeping them away from their families at home.

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Congratulations

You have successfully completed this portion of this course and are ready to take the post test.

Take the post test and score at least 80% to successfully complete the test. After passing the test, provide us with your valuable feedback in the brief evaluation so that we may continue to improve our programs. The evaluation is **not** required for successful completion of this course.

Thank you!

HR Learning Management