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Appendices

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Individual Measures (patient-based)

Growth Parameters

- **Weight** (growth velocity – ideally measured from weight nadir)
- **Length** (ideally using length board)
- **Head circumference**

Refer to **TOOL #1** on page 10 for Growth Chart Options.

Nutritional Milestones

- **Colostrum use**: first use, use for mouth care
- **Feeding history**:
  - First feed (MOM, Donor HM, formula)
  - Discharge feeding (BM @ discharge)
- **MBM use**
- **PN use**: initiation, days of PN, discontinuation
- **Central line days** (w/or w/o PN use)
- **Feeding milestones** (age of): birthweight regained, achieving full feeds (e.g. > 140 mL/kg/day), first non-nutritive breastfeeding, first nutritive breastfeeding
- **Skin-to-skin (kangaroo) care documentation** (1st SSC, frequency and duration)

Related Clinical Diagnoses (balancing measures)

- Spontaneous intestinal perforation
- Necrotizing enterocolitis
- CLABSI

Maternal Milestones/Measures

- Documentation of breastfeeding education
- Time to first pumping
- Maternal milk supply (pump log)

Laboratory Testing

See **TOOL #2** on page 11.
Unit-Based Measures (ideally stratified by gestational age/birthweight)

Growth Parameters

- Weight (growth velocity)*
- Length velocity
- Head circumference velocity

Nutritional Milestones

- Colostrum use
- First feed (MOM, Donor HM, formula)
- MBM use (% of total feeds)
- Discharge feeding (BM @ d/c)*
- Parenteral Nutrition (PN) measurements
  - % started PN by 24 hr.
  - % protein ≥ 3 gm/kg/day by 3 days
  - % > 80 kCal/kg/d by 5 days
  - average age when lipids ≥ 3 gm/kd/day
  - % of patients getting PN > 30 days
- Central line days (w/ or w/o PN use)
- Average age when birthweight regained
- Average age of achieving full feeds
- Average age of first non-nutritive breastfeeding
- Average age of first nutritive breastfeeding
- Skin-to-skin (kangaroo) care documentation (1st, frequency)

Breastmilk Errors

Rates of Related Clinical Diagnoses
(balancing measures)

- Spontaneous intestinal perforation*
- Necrotizing enterocolitis*
- CLABSI*

Maternal Measures

- % of mothers getting breastfeeding education
- Prenatal teaching
- First NICU teaching
- % and timing of lactation consultation
- Time to first pumping
- % of mothers documenting milk supply (pump log)

* Data element found in CPQCC/VON or other benchmarking report
NICU Breastfeeding/Breastmilk Resources

- Human Milk for Preterm Infants, Mimouni FB & Koletzko B, eds. Clinics in Perinatology, March 2017, Multiple articles

Milk Banking

- Human Milk Banking Association of North America (www.hmbana.org)
- Mothers’ Milk Bank (Only non-profit milk bank in California)
  751 South Bascom Ave
  San Jose, CA 95128
  Phone (408) 998-4550
  FAX (408) 297-9208
  mothersmilkbank@hhs.co.santa-clara.ca.us
  www.mothersmilk.org

- Prolacta Bioscience (http://www.prolacta.com)
Other Resources:

- Ban the Bags (http://banthebags.org/)
- Academy of Breastfeeding Medicine Protocols (www bfmed.org)
- Supporting Premature Infant Nutrition (SPIN), UCSD (https://health.ucsd.edu/specialties/obgyn/maternity/newborn/nicu/spin/Pages/default.aspx)
- Center for Disease Control and Prevention (https://www.cdc.gov/breastfeeding/)
- Global Health Media – Videos (https://globalhealthmedia.org/videos)
- Open Pediatrics – Breastfeeding (https://www.openpediatrics.org/search/site/Breastfeeding)