louisiana healthcare connections

Clinical Policy: NICU Discharge Guidelines

Reference Number: LA.CP.MP.81
Last Review Date: 08/2020 Revision Log

See Important Reminder at the end of this policy for important regulatory and legal information.

Description
Infants who require neonatal admission remain at increased risk for morbidity and mortality following discharge. These infants require comprehensive discharge planning to ensure a smooth transition from the neonatal intensive care unit (NICU) and reduce morbidity and mortality after discharge.

Policy/Criteria
It is the policy of Louisiana Healthcare Connections that infants are considered medically ready for discharge if the following physiologic competencies in I-V are met, or for a lower level of care if the authorization protocol in VI are met:

I. Sufficient nutrition to support appropriate growth, both of the following:
- A. Adequate pattern of weight gain, one of the following:
  1. Preterm infants or term infants > 1 week of age demonstrate a consistent pattern of weight gain (typically about 3 days) via the current nutritional route;
  2. ≤ 7% of birth weight lost in term infants < 1 week of age.
- B. The nutritional product, enteric or intravenous, is appropriate for the nutritional needs of the infant and one of the following: [4,6-8]
  1. The infant is on full oral nutrition;
  2. Home management of specialized nutrition needs, all of the following:
     - a. Caregiver and provider agree to home management;
     - b. Consultations (e.g. gastroenterology and nutrition) completed;
     - c. Appropriate feeding evaluation, family assessment and therapeutic interventions completed;
     - d. One of the following:
       - i. Gavage feeding for an infant who cannot feed well enough orally and for whom feeding is the last issue requiring continued hospitalization;
       - ii. Long-term gastrostomy tube feedings for infants with minimal or no ability to feed orally, or the expectation of such. *Note:* Gastrostomy tube placement may be prior to NICU discharge or after a short-term trial of nasogastric (NG)/oral feeds at home;
       - iii. Intravenous (IV) total parenteral nutrition (TPN) as a nutritional source:
         - a) Infant has an inadequate ability to absorb calories (short gut);
         - b) Fluid and electrolyte requirements have stabilized, as documented by the physician. [4,10-11]

II. Ability to maintain normal body temperature in a home environment
- A. Infant demonstrates the ability to maintain normal body temperature (>36.4 C axillary) while clothed in an open bed/crib with normal ambient temperature (20 to 25º C).

Note: Weaning from an isolette should be considered when an infant in a stable cardiopulmonary state reaches >1600 grams and is able to be swaddled. [17,18]

III. Mature respiratory control, one of the following:
- A. Infant is stable on room air; [4, 12-16]
- B. Infant is stable but has ongoing respiratory needs requiring additional support, all of the following:
  1. Caregiver and physician agree to home management;
  2. Appropriate consultations and home equipment arrangements made;
  3. Infant has one or more of the following conditions:
     - a. Bronchopulmonary dysplasia (BPD) and on low flow nasal cannula at any oxygen concentration with a flow rate of ≤ 1.0 LPM (liters per minute);
     - b. Tracheostomy and requires positive pressure ventilation:
       - i. Ventilator settings are stable and fraction of inspired O_2 is ≤ 40% utilizing a home ventilator;
       - ii. Home nursing support is arranged;
     - c. Ongoing medical conditions that increase risk for apnea, airway obstruction, or hypoxia and both of the following:
       - i. Assessment completed to determine which type of home monitoring system is appropriate (pulse oximetry monitor, cardiorespiratory monitor);
       - ii. Caregiver training in infant CPR.

Note: For guidelines for discharge of infants with apnea of prematurity, reference *LA.CP.MP.82 NICU Apnea and Bradycardia*.

IV. Bilirubin levels are acceptable based on hours of life and risk factors (reference relevant nationally recognized clinical decision support criteria, and/or *LA.CP.MP.150 Home Phototherapy)*.

V. Free of infection, both of the following:
- A. No serious infection;
- B. Completion of a course of parenteral antibiotics at home, all of the following:
  1. The patient is otherwise clinically well (asymptomatic);
  2. The caregiver and physician agree to home antibiotics;

Note: Reference *LA.CP.MP.85 Neonatal Sepsis Management Guidelines.*

VI. Authorization Protocol
- A. As an infant stabilizes, a lower level of care is appropriate for addressing medical needs. If there are no significant medical issues necessitating continued stay in Level I, II, III or IV nursery, the transitional care nursery level should be approved for the following.
  1. Completion of an approved duration of antibiotic treatment *(Please reference LA.CP.MP.85 Neonatal Sepsis Management Guidelines);*
  2. Weaning of O_2 for a BPD patient or periodic O_2 needed for a patient that is progressing toward discharge on room air, as supported by physician documentation;

3. Tube feeding < 50% of daily caloric requirement and progressing toward discharge on all oral feedings as supported by physician documentation;

Note: Short term home NG feedings should be considered particularly when the infant is term or near term gestation.

4. Apnea or bradycardia monitoring with a new significant episode in the last 5 days and not planning to go home on a monitor (*reference LA.CP.MP.82 NICU Apnea Bradycardia Guidelines*);

Note: Reference *LA.CP.MP.86 NAS Guidelines for drug withdrawal treatment guidelines* for concerns of drug withdrawal.

B. Review for Level I or transitional care nursery days for social reasons such as discharge teaching, awaiting foster placement, inappropriate maternal behavior/poor bonding, unsafe home environment or maternal lengthened postpartum course, illness or disability must be sent to the medical director for review. These days may be denied as not medically necessary if Benefit Plan Contract does not include coverage for social days as medically necessary.

Note: Parent discharge teaching and rooming in should be completed coincidentally with the achievement of medical stability and not after achieving medical stability.

NICU Discharge Recommended Practices

A. Verify before discharge all of the following:
   1. The home/foster care environment is deemed safe and accessible;
   2. The parent or caregiver demonstrates the ability to manage the care of the infant;
   3. Follow-up care planned and communicated between caregivers and providers;
   4. Medications reconciled;
   5. Transportation needs identified and addressed;
   6. In cases of foster care placement, case worker contact information should be identified. The case worker should be involved and kept updated regarding discharge plans.
B. Screening Tests
   1. State-mandated metabolic screening testing should be completed;
   2. Screening for retinopathy of prematurity per AAP guidelines should be performed (or arranged as outpatient) with an ophthalmologist skilled in the evaluation of the retina of the preterm infant, with adequate follow-up for patients with active disease;
   3. Hearing screening should be completed prior to discharge with follow-up plans for infants requiring a full audiology assessment;
   4. An assessment of cardiorespiratory stability in a car seat is recommended prior to discharge for infants born at < 37 weeks gestation or with other risk factors for respiratory compromise (e.g. neuromuscular, orthopedic problems).
C. Immunizations
   1. Infants should receive appropriate immunizations per CDC guidelines before discharge (or arranged as an outpatient) based on their post-natal age;
   2. Specialized immunizations, when indicated (e.g. respiratory syncytial virus prophylaxis) should be administered prior to discharge;

3. Every effort should be made to assure that parents and caretakers have been immunized against pertussis with the TDaP vaccine;

D. All parents should be encouraged to attend infant CPR class.

Background:

Nutritional competency

Weight itself should not be a criterion for discharge. Early hospital discharge is safe and feasible for very-low-birth-weight infants when behavioral and parental criteria, rather than achieved weight, serve as discharge indicators [1-4]. Term infants often have a 5-7% weight loss in the first week of life with an expectation that they will be back to birth weight by 10-14 days of age.

Respiratory Control

Preterm infants typically demonstrate mature respiratory control by 36-37 weeks post gestational age. Occasionally maturation of respiratory control can be delayed to up to 44 weeks.

Home oxygen therapy for infants with bronchopulmonary dysplasia has been used safely to achieve earlier hospital discharge.[11, 13] According to the Canadian pediatric society, some infants with prolonged oxygen dependency may be candidates for home oxygen therapy.[21] In making decisions about home oxygen, each family's needs should be considered individually, balancing the burden of prolonged hospitalization with the impact of caring for an infant on home oxygen.[21]

Cardiorespiratory monitoring is indicated when an infant has an ongoing medical condition that increases risk for apnea, airway obstruction, or hypoxemia.[22] Examples of conditions requiring home cardiorespiratory monitoring include, but are not limited to, the following:

- Pharmacological treatment of respiratory immaturity or continued apnea at term or near-term gestation (apnea of prematurity or apnea of infancy)
- Chronic lung disease (eg, bronchopulmonary dysplasia), especially those requiring supplemental oxygen, positive airway pressure, or mechanical ventilatory support
- Congenital myasthenic syndromes
- Tracheostomy or other airway abnormalities.

Reviews, Revisions, and Approvals	Date	Approval Date
Converted corporate to local policy.	08/15/2020	

References

1. Davies DP, Herbert S, Haxby V, McNeish AS. When should pre-term babies be sent home from neonatal units? *Lancet.* 1979; 1(8122):914–915.
2. Brooten D, Kumar S, Brown L, et al. A randomized clinical trial of early hospital discharge and home follow-up of very-low-birth-weight infants. *N Engl J Med.* 1986; 315(15):934–939.
3. Casiro OG, McKenzie ME, McFadyen L, et al. Earlier discharge with community-based intervention for low birth weight infants: a randomized trial. *Pediatrics.* 1993;92(1):128–134\
4. American Academy of Pediatrics Committee on Fetus and Newborn. Hospital discharge of the high-risk neonate. Pediatrics 2008; 122:1119. Reaffirmed November 2018.

5. American Academy of Pediatrics. Policy statement: updated guidance for palivizumab prophylaxis among infants and young children at increased risk of hospitalization for respiratory syncytial virus infection. Pediatrics. 2014; Collins CT, Makrides M, McPhee AJ. Early discharge with home support of gavage feeding for stable preterm infants who have not established full oral feeds. *Cochrane Database Syst Rev. 2015 Jul 8;(7):CD003743.*
6. Örtenstrand A, Waldenström U, Winbladh B. Early discharge of preterm infants needing limited special care, followed by domiciliary nursing care. *Acta Paediatr.* 1999; 88(9):1024–1030.
7. Örtenstrand A, Winbladh B, Nordström G, Waldenström U. Early discharge of preterm infants followed by domiciliary nursing care: parents' anxiety, assessment of infant health and breastfeeding. *Acta Paediatr.* 2001; 90(10):1190–1195.
8. Buchman AL. Complications of long-term home total parenteral nutrition: their identification, prevention and treatment. *Dig Dis Sci*. 2001; 46:1–18.
9. Buchman AL, Scolapio J, Fryer J. AGA Technical Review on short bowel syndrome and intestinal transplantation. *Gastroenterology* 2003; 124:1111-1134.
10. Pinney MA, Cotton EK. Home management of bronchopulmonary dysplasia. *Pediatrics.* 1976; 58(6):856–859.
11. Halliday HL, Dumpit FM, Brady JP. Effects of inspired oxygen on echocardiographic assessment of pulmonary vascular resistance and myocardial contractility in bronchopulmonary dys-plasia. *Pediatrics.* 1980; 65(3):536–540.
12. Groothuis JR, Rosenberg AA. Home oxygen promotes weight gain in infants with bronchopulmonary dysplasia. *Am J Dis Child.* 1987; 141(9):992–995.
13. Sekar KC, Duke JC. Sleep apnea and hypoxemia in recently weaned premature infants with and without bronchopulmonary dysplasia. *Pediatr Pulmonol.* 1991; 10(2):112–116.
14. Garg M, Kurzner SI, Bautista DB, Keens TG. Clinically unsuspected hypoxia during sleep and feeding in infants with broncho-pulmonary dysplasia. *Pediatrics.* 1988; 81(5):635–642.
15. Moyer-Mileur LJ, Nielson DW, Pfeffer KD, Witte MK, Chapman DL. Eliminating sleep-associated hypoxemia improves growth in infants with bronchopulmonary dysplasia. *Pediatrics.* 1996; 98; 779–783.
16. Schneiderman R, Kirkby S, Turenne W, Greenspan J. Incubator weaning in preterm infants and associated practice variation. *J Perinatol.* 2009 Aug; 29(8):570-4.
17. Enrico Zecca, Mirta Corsello, Francesca Priolo, Eloisa Tiberi, Giovanni Barone and Costantino Romagnoli. Early Weaning From Incubator and Early Discharge of Preterm Infants: Randomized Clinical Trial. *Pediatrics.* 2010; 126; e651.
18. Muchowski, KE. Evaluation and Treatment of Neonatal Hyperbilirubinemia. *American Family Physician*. 2014; Jun 1; 89(11):873-878.
19. Smith VC and Stewart J. Discharge planning for high-risk newborns. UpToDate. Abrams SA(Ed). Accessed 5/18/2020.
20. Benitz WE, Committee on fetus and newborn. Hospital stay of healthy term newborn infants. *Pediatrics.* 2015; 135(5).
21. Jeffries AL, Canadian Pediatric Society, Fetus and Newborn Committee. Going home: Facilitating discharge of the preterm infant. *Paediatrics & Child Health*. 2014; 19(1) pg.31–36.
22. Corwin MJ. Use of home cardiorespiratory monitors in infants. UpToDate. Mallory GB, Weisman LE (Eds.) Accessed 5/19/2020.

Important Reminder

This clinical policy has been developed by appropriately experienced and licensed health care professionals based on a review and consideration of currently available generally accepted standards of medical practice; peer-reviewed medical literature; government agency/program approval status; evidence-based guidelines and positions of leading national health professional organizations; views of physicians practicing in relevant clinical areas affected by this clinical policy; and other available clinical information. LHCC makes no representations and accepts no liability with respect to the content of any external information used or relied upon in developing this clinical policy. This clinical policy is consistent with standards of medical practice current at the time that this clinical policy was approved.

The purpose of this clinical policy is to provide a guide to medical necessity, which is a component of the guidelines used to assist in making coverage decisions and administering benefits. It does not constitute a contract or guarantee regarding payment or results. Coverage decisions and the administration of benefits are subject to all terms, conditions, exclusions and limitations of the coverage documents (e.g., evidence of coverage, certificate of coverage, policy, contract of insurance, etc.), as well as to state and federal requirements and applicable LHCC administrative policies and procedures.

This clinical policy is effective as of the date determined by LHCC. The date of posting may not be the effective date of this clinical policy. This clinical policy may be subject to applicable legal and regulatory requirements relating to provider notification. If there is a discrepancy between the effective date of this clinical policy and any applicable legal or regulatory requirement, the requirements of law and regulation shall govern. LHCC retains the right to change, amend or withdraw this clinical policy, and additional clinical policies may be developed and adopted as needed, at any time.

This clinical policy does not constitute medical advice, medical treatment or medical care. It is not intended to dictate to providers how to practice medicine. Providers are expected to exercise professional medical judgment in providing the most appropriate care, and are solely responsible for the medical advice and treatment of members. This clinical policy is not intended to recommend treatment for members. Members should consult with their treating physician in connection with diagnosis and treatment decisions.

Providers referred to in this clinical policy are independent contractors who exercise independent judgment and over whom LHCC has no control or right of control. Providers are not agents or employees of LHCC.