Clinical Performance Guideline
Neonatal Resource Services Discharge Planning

**Purpose:** To provide a guideline for discharge planning to home for the neonate in the NICU.

**Target Client Population:** The target population includes all neonates admitted to the NICU. The discharge planning process is especially critical for those neonates who are admitted at a gestational age of 32 weeks or less and/or who have a complicated course in the NICU requiring focused follow-up after discharge.

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<th>Background</th>
<th>The discharge planning process is critical to ensuring that the neonate in the NICU will receive appropriate care following discharge from the NICU. It should be initiated as soon as possible following admission of the neonate to the NICU and include caregiver engagement to the maximum extent possible. Caregiver engagement facilitates involvement in the care of their neonate in the NICU, promotes earlier discharge from the NICU, and decreases the possibility of re-admission after discharge.</th>
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| Treatment Criteria | Clinical evidence in the medical literature supports the following:

The neonate should be considered ready for discharge when the following parameters have been met:

- The neonate has not had any apneas or bradycardias as defined in the NRS Apnea and Bradycardia Clinical Guideline. The infant should be breathing in room air or receiving minimal supplemental oxygen support.

- The neonate is demonstrating full oral feeds with a pattern of average weight gain of 10 -20 grams/kg/day over several days for those neonates who are < 32 weeks at birth. The later preterm or full term neonate may exhibit evidence of a weight loss of up to 8 – 10% in the first week to 10 days of life at the time of discharge. Late preterm or term infants do not need to exhibit weight gain before discharge but should meet all other physiologic criteria before discharge.

- The neonate is able to maintain his/her temperature in an open crib.

- The parents/caregivers demonstrate the ability to adequately care for the infant and meet all of their needs. This includes basic neonatal care, CPR if necessary and any specialized skills such as the use of medical equipment and/or administration of home medications.

The following specific tasks should be performed in a timely manner and should not cause a delay of discharge in the absence of a specific skilled nursing requirement:

- Car Seat Challenge for preterm and low birth weight infants
- Newborn Screening
- Hearing Screening
- Ophthalmology Examination for retinopathy of prematurity (ROP) based on the risk for ROP |
### Treatment Criteria (continued)

- Critical congenital heart disease screening (This screening is applicable to infants who would be discharged from the hospital during their first week of life.)
- Assessment of hematologic status
- Circumcision
- Immunization administration that conforms to the corrected age of the neonate including palivizumab (Synagis®) for appropriate infants during respiratory syncytial virus season. Recommended immunizations should be administered at least 2 days prior to discharge except for live attenuated immunizations where viral shedding may be a concern.
- Scheduling of necessary medical follow-up for routine care or unresolved and/or ongoing medical issues. This task should include identification of the primary care provider, medical specialists/subspecialists, psychosocial support personnel and health care facilities that may be needed following discharge.
- Discussion of infant safety precautions including sleep positioning, prevention of infection, use of car seats, home environment, and sun protection.
- Ordering of durable medical equipment and supplies needed for discharge
- Making arrangements for private duty nursing or other home care services (when applicable)

Evaluation of the home environment and family members who have primary responsibility for the subsequent care of the neonate should be performed. Family issues should have been identified early during the neonate’s NICU stay in order to avoid an inappropriate delay in the discharge of a neonate who is clinically ready. This evaluation might include a psychological assessment, if necessary, by licensed social service personnel or like disciplines. A home visit would be indicated under circumstances where there is a question of the adequacy of the caregivers or home environment.

### Clinical Evidence

- Saari and the Committee on Infectious Diseases (2003) produced a clinical report on Immunization of Preterm and Low Birth Weight Infants. This report indicates medically stable preterm and low birth weight infants should be given routinely recommended immunizations based on their chronological age and that all routine vaccinations are safe for the preterm and low birth weight infant.
- In 2008 the American Academy of Pediatrics updated their Hospital Discharge of the High-Risk Neonate policy statement. This document provides recommendations regarding infant readiness and timing of discharge, caregiver education, follow-up care, and the discharge planning process.
- A 2006 Cochrane Neonatal Review by Pilley & McGuire attempted to review the available evidence from randomized controlled trials to determine whether the pre-discharge car seat challenge recommended by the AAP prevented morbidity and mortality in preterm infants. They did not find any trials that fulfilled their eligibility criteria and were unable to determine whether the car seat challenge was beneficial or harmful to the preterm infant.
- Bull & Engle, in collaboration with the Committee on Injury, Violence, and Poison Prevention and the Committee on Fetus and Newborn, produced a clinical report in 2009 which provided guidelines on car seat safety for preterm and low birth weight infants. They emphasize the proper selection of car seats and car beds for these infants and recommend a 90-120 minute (or the duration of the infant’s trip home if longer) pre-discharge observation period in a car seat to assess for cardiovascular events. They feel this observation could minimize the risk of adverse events.
### Clinical Evidence (continued)

- A prospective observational study by Furck et al (2010) evaluated adverse events following immunizations in infants born at <1500 grams. They found apnea appeared more frequently in infants who were younger at the time of immunization but concluded vaccination of premature infants whose birth weight was <1500 grams was safe.

- Kempter et al (2011) outlines recommendations for critical congenital heart disease (CCHD) screening developed by a work-group comprised of members selected by the Secretary’s Advisory Committee on Heritable Disorders in Newborns and Children, the American Academy of Pediatrics, the American College of Cardiology Foundation, and the American Heart Association. This work-group found sufficient evidence to recommend CCHD screening in well-infant and intermediate care nurseries. They considered screening within the NICUs but realized that setting was challenging because of the heterogeneity of underlying conditions.

- In 2012, the American Academy of Pediatrics (AAP) published a policy statement which endorsed the September 2011 HHS Secretary’s recommendation for CCHD screening. This statement is directed at screening of healthy newborn infants at least 24 hours of age or as late as possible if early discharge is planned. Screening would be performed via pulse oximetry reading of the right hand and one foot. Passing results would include a reading of ≥ 95% in either extremity with a ≤ 3% absolute difference between the upper and lower extremity.

- Bhutani et al (2013) evaluated the combined use of total serum bilirubin (TSB) and clinical risk factors of healthy infants ≥ 35 weeks gestation to determine whether this assessment could more accurately identify infants who would need subsequent phototherapy. They concluded pre-discharge TSB (adjusted for postnatal age) and clinical risk factor assessment is the best evaluation for predicting subsequent phototherapy use and this strategy could improve the outcomes of healthy infants discharged early.

- A 2013 clinical statement developed by the American Academy of Pediatrics Section on Ophthalmology, American Academy of Ophthalmology, American Association for Pediatric Ophthalmology and Strabismus and American Association of Certified Orthoptists updated a prior 2006 statement on screening of preterm neonates for retinopathy of prematurity (ROP). These recommendations address when the initial and follow-up ROP screening exam(s) should be performed based on the infant’s postmenstrual age and also the severity of comorbid conditions.
Bibliography


Mills MM, Sims DC, Jacob J. Implementation and case-study results of potentially better practices to improve the discharge process in the neonatal intensive care unit. Pediatrics. 2006; 118; S124-S133.


Stumpf KA, Thompson T, Sanchez PJ. Rotavirus vaccination of very low birth weight infants at discharge from the NICU. Pediatrics. 2013 Sep;132(3):e662-5.

Revision History
The following are approved changes incorporated into the revision numbers indicated below.

<table>
<thead>
<tr>
<th>Revision Date</th>
<th>Description of Change</th>
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<tbody>
<tr>
<td>1.0 05/16/2013</td>
<td>New clinical guideline (MB)</td>
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<tr>
<td>2.0 01/26/2014</td>
<td>Job aid revised into medical necessity clinical guideline (CE)</td>
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