

Medical Policy



Bilirubin Light (Phototherapy/Bili-blanket)

▼ Description

A home bilirubin light (phototherapy/bili-blanket) is an alternative to inpatient hospital treatment for the management of elevated bilirubin levels in the newborn, known as hyperbilirubenemia. It involves the exposure of the newborn to an ultraviolet light source (bili-light) in the home for a prescribed period of time. The therapy may be in the form of a lamp, light panel, or special light blanket.

▼ Policy

Home phototherapy is considered **reasonable and necessary** for a full-term infant (greater than or equal to 37 weeks gestation) whose elevated bilirubin is not due to primary hepatic disorder who meets the coverage criteria outlined below.

▼ Policy Guidelines

Coverage Criteria:

1. Must be ordered by the Member's treating physician.
2. Member selection guidelines:
 - a) Full-term infants (greater than or equal to 37 weeks gestation), older than forty-eight hours, otherwise healthy
 - b) Normal physical examination (no significant abnormalities; no significant weight loss)
 - c) Actively feeding by breast or bottle with no evidence of dehydration
 - d) Stooling and voiding by 24 hours of age
 - e) Serum bilirubin concentration greater than 14 mg/dL but less than 18 mg/dL
 - f) Bilirubin concentrations as listed below indicate consideration of phototherapy:
 - g)

Age, hours	Consider Phototherapy when total serum bilirubin, mg/dl (μ mol/L)
25-48	Greater than or equal to 12 (170)
49-72	Greater than or equal to 15 (260)
Greater than 72	Greater than or equal to 17 (290)

- h) Diagnostic evaluation (described below) negative; and
 - i) Adequate home and parental environment
 - j) The device is ordered in conjunction with a home care treatment plan.
3. Prior to therapy, a diagnostic evaluation should include:
- a) History and physical examination
 - b) Hemoglobin concentration or hematocrit
 - c) WBC count and differential count
 - d) Blood smear for red cell morphology platelets
 - e) Reticulocyte counts
 - f) Total and direct-reacting bilirubin concentration
 - g) Maternal and infant blood typing and Coombs test, and
 - h) Urinalysis including a test for reducing substances.

▼ HCPCS Level II Codes and Description

Equipment:

E0202 Bilirubin (phototherapy) light with photometer

▼ Important Note:

Northwood's Medical Policies are developed to assist Northwood in administering plan benefits and determining whether a particular DMEPOS product or service is reasonable and necessary. Equipment that is used primarily and customarily for a non-medical purpose is not considered durable medical equipment.

Coverage determinations are made on a case-by-case basis and are subject to all of the terms, conditions, limitations, and exclusions of the member's contract including medical necessity requirements.

The conclusion that a DMEPOS product or service is reasonable and necessary does not constitute coverage. The member's contract defines which DMEPOS product or service is covered, excluded or limited. The policies provide for clearly written, reasonable and current criteria that have been approved by Northwood's Medical Director.

The clinical criteria and medical policies provide guidelines for determining the medical necessity for specific DMEPOS products or services. In all cases, final benefit determinations are based on the applicable contract language. To the extent there are any conflicts between medical policy guidelines and applicable contract language, the contract language prevails. Medical policy is not intended to override the policy that defines the member's benefits, nor is it intended to dictate to providers how to direct care. Northwood Medical policies shall not be interpreted to limit the benefits afforded to Medicare or Medicaid members by law

and regulation and Northwood will use the applicable state requirements to determine required quantity limit guidelines.

Northwood's policies do not constitute medical advice. Northwood does not provide or recommend treatment to members. Members should consult with their treating physician in connection with diagnosis and treatment decisions.

▼References

1. American Academy of Pediatrics, Provisional Committee for Quality Improvement and Subcommittee on Hyperbilirubinemia. Practice parameter: Management of hyperbilirubinemia in the healthy term newborn. *Pediatrics*. 1994;94(4 Pt 1):558-565 (reviewed 2000).
2. American Academy of Pediatrics and American College of Obstetricians and Gynecologist. *Guidelines for Perinatal Care*. 4th ed. Elk Grove Village, IL: AAP; 1997.
3. Behrman RE, ed. *Nelson Textbook of Pediatrics*. 16th ed. Philadelphia, PA: W.B. Saunders Co.; 2000:513-519.
4. Hamelin K, Seshia M. Home phototherapy for uncomplicated neonatal jaundice. *Can Nurse*. 1998;94(1):39-40.
5. Maisels MJ, Kring E. Length of stay, jaundice, and hospital readmission. *Pediatrics*. 1998;101(6):995-998.
6. Seidman DS, Stevenson DK, Ergaz Z, et al. Hospital readmission due to neonatal hyperbilirubinemia. *Pediatrics*. 1995;96(4 Pt 1):727-729.
7. Torres-Torres M, Tayaba R, Weintraub A, et al. New perspectives on neonatal hyperbilirubinemia. *Mt Sinai J Med*. 1994;61(5):424-428.
8. Lazar L, Litwin A, Nerlob P. Phototherapy for neonatal nonhemolytic hyperbilirubinemia. Analysis of rebound and indications for discontinuing phototherapy. *Clin Pediatr*. 1993;32:264-267.
9. Schuman AJ, Karush G. Fiberoptic vs conventional home phototherapy for neonatal hyperbilirubinemia. *Clin Pediatr (Phila)*. 1992;31(6):345-352.
10. Newman TB, Maisels MJ. Evaluation and treatment of jaundice in the term infant: A kinder, gentler approach. *Pediatrics*. 1992;89:809-818.
11. Wennberg RP. Bilirubin recommendations present problems: New guidelines simplistic and untested. *Pediatrics*. 1992;89:821-822.
12. Merenstein GB. 'New' bilirubin recommendations questioned. *Pediatrics*. 1992;89:822-823.

13. Poland RL. In search of a 'gold standard' for bilirubin toxicity. *Pediatrics*. 1992;89:823-824.
14. Brown AK, Seidman DS, Stevenson DK. Jaundice in healthy term neonates: Do we need new action levels or new approaches? *Pediatrics*. 1992;89:827-828.
15. Johnson LH. Hyperbilirubinemia in the term infant: When to worry, when to treat. *NY State J Med*. 1991;91:483-489.
16. Savinetti-Rose B, Kempfer-Kline RE, Mabry CM. Home phototherapy with the fiberoptic blanket. The nurse's role in caring for newborns and their caregivers. *J Perinatol*. 1990;10(4):435-438.
17. Ludwig MA. Phototherapy in the home setting. *J Pediatr Health Care*. 1990;4(6):304-308.
18. Grabert BE, Wardwell C, Harburg SK. Home phototherapy. An alternative to prolonged hospitalization of the full-term, well newborn. *Clin Pediatr (Phila)*. 1986;25(6):291-294.
19. Gartner LM, Gartner LM,. Practice patterns in neonatal hyperbilirubinemia. *Pediatrics*. 1998;101(1 Pt 1):25-31.
20. Centers for Disease Control and Prevention (CDC). Kernicterus in full-term infants--United States, 1994-1998. *MMWR Morb Mortal Wkly Rep*. 2001;50(23):491-494.
21. Weisiger RA. Hyperbilirubinemia, conjugated. *eMedicine J*. 2002;3(1). Available at: <http://www.emedicine.com/med/topic1065.htm>. Accessed July 16, 2002.
22. Valaes T. Problems with prediction of neonatal hyperbilirubinemia. *Pediatrics*. 2001;108(1):175-177.
23. Stevenson DK, Fanaroff AA, Maisels MJ, et al. Prediction of hyperbilirubinemia in near-term and term infants. *Pediatrics*. 2001;108:31-39.
24. Stevenson DK, Fanaroff AA, Maisels MJ, et al. Prediction of hyperbilirubinemia in near-term and term infants. *J Perinatol*. 2001;21 Suppl 1:S63-S87.
25. Natus Medical Inc. ETCOc - An indicator of elevated hemolysis in neonatal hyperbilirubinemia. *Clinical Information*. San Carlos, CA: Natus Medical Inc.; 2002. Available at: http://www.natus.com/information/breath_analysis/. Accessed July 16, 2002.

26. Conseil de Évaluation des Technologies de la Santé du Québec (CETS). Transcutaneous bilirubinometry in the context of early postnatal discharge. CETS 99-6 RE. Montreal, QC: CETS; October 2000. Available at: http://www.aetmis.gouv.qc.ca/fr/publications/scientifiques/maternite_naissance/1999_06_en.pdf. Accessed June 7, 2004.
27. Porter ML, Dennis BL. Hyperbilirubinemia in the term newborn. *Am Fam Physician*. 2002;65(4):599-606.
28. Maisels MJ, Watchko JF. Treatment of jaundice in low birthweight infants. *Arch Dis Child Fetal Neonatal Ed*. 2003;88(6):F459-F463.
29. Ip S, Glicken S, Kulig J, et al. Management of neonatal hyperbilirubinemia. Evidence Report/Technology Assessment No. 65. Rockville, MD: Agency for Healthcare Research and Quality (AHRQ); 2002.
30. French S. Phototherapy in the home for jaundiced neonates. Evidence Centre Evidence Report. Clayton, VIC: Centre for Clinical Effectiveness (CCE); 2003.
31. Evans D. Neonatal jaundice. In: *BMJ Clinical Evidence*. London, UK: BMJ Publishing Group; November 2006.
32. American Academy of Pediatrics Subcommittee on Hyperbilirubinemia. Management of hyperbilirubinemia in the newborn infant 35 or more weeks of gestation. *Pediatrics*. 2004;114(1):297-316.
33. Dennery PA. Metalloporphyrins for the treatment of neonatal jaundice. *Curr Opin Pediatr*. 2005;17(2):167-169.
34. Wennberg RP, Ahlfors CE, Bhutani VK, et al. Toward understanding kernicterus: A challenge to improve the management of jaundiced newborns. *Pediatrics*. 2006;117(2):474-485.
35. Suresh GK, Martin CL, Soll RF. Metalloporphyrins for treatment of unconjugated hyperbilirubinemia in neonates. *Cochrane Database Syst Rev*. 2003;(1):CD004207.
36. Thayyil S, Milligan DW. Single versus double volume exchange transfusion in jaundiced newborn infants. *Cochrane Database Syst Rev*. 2006;(4):CD004592.
37. Makay B, Duman N, Ozer E, et al. Randomized, controlled trial of early intravenous nutrition for prevention of neonatal jaundice in term and near-term neonates. *J Pediatr Gastroenterol Nutr*. 2007;44(3):354-358.
38. Canadian Paediatric Society, Fetus and Newborn Committee. Guidelines for detection, management and prevention of hyperbilirubinemia in term and late preterm newborn infants (35 or more weeks' gestation). Reference No. FN07-02. *Paediatrics Child Health*. 2007;12(5):1B-12B.

39. Murki S, Dutta S, Narang A, et al. A randomized, triple-blind, placebo-controlled trial of prophylactic oral phenobarbital to reduce the need for phototherapy in G6PD-deficient neonates. J Perinatol. 2005;25(5):325-330.
40. Thomas JT, Muller P, Wilkinson C. Antenatal phenobarbital for reducing neonatal jaundice after red cell isoimmunization. Cochrane Database Syst Rev. 2007;(2):CD005541.
41. Maisels MJ, McDonagh AF. Phototherapy for neonatal jaundice. N Engl J Med. 2008;358(9):920-928.
42. Morris BH, Oh W, Tyson JE, et al; NICHD Neonatal Research Network. Aggressive vs. conservative phototherapy for infants with extremely low birth weight. N Engl J Med. 2008;359(18):1885-1896.
43. De Luca D, Zecca E, Corsello M, et al. Attempt to improve transcutaneous bilirubinometry: A double-blind study of Medick BiliMed versus Respironics BiliCheck. Arch Dis Child Fetal Neonatal Ed. 2008;93(2):F135-F139.
44. Trikalinos TA, Chung M, Lau J, Ip S. Systematic review of screening for bilirubin encephalopathy in neonates. Pediatrics. 2009;124(4):1162-1171.
45. US Preventive Services Task Force; Agency for Healthcare Research and Quality. Screening of infants for hyperbilirubinemia to prevent chronic bilirubin encephalopathy: US Preventive Services Task Force recommendation statement. Pediatrics. 2009;124(4):1172-1177.

Applicable URAC Standard

Core 8	Staff operational tools and support
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Change/Authorization History

Revision Number	Date	Description of Change	Prepared / Reviewed by	Approved by	Review Date:
A	11-20-06	Initial Release	Rosanne Brugnani	Ken Fasse	n/a
01		Annual Review – no changes	Susan Glomb	Ken Fasse	12-2008
02	12-04-09	Annual Review- no changes	Susan Glomb	Ken Fasse	Dec.09
03	11-19-10	Annual Review – No changes	Susan Glomb	Ken Fasse	Nov.10

04	07-20-11	Added Important Note to all Medical Policies	Susan Glomb	Dr. B. Almasri	
05	11-07-11	Annual Review. Added Reference to Policy	Susan Glomb	Dr. B. Almasri	Nov. 11
06	04-03-12	Added reference to NH Medicaid	Susan Glomb	Dr. B. Almasri	
07	11-27-12	Annual Review- no changes	Susan Glomb	Dr. B. Almasri	
08	12-18-13	Annual review. No changes	Susan Glomb	Dr. B. Almasri	
09	11-24-14	Annual Review. No changes	Susan Glomb	Dr. B. Almasri	
10	10-30-2015	Annual Review. No Changes.	Lisa Wojno	Dr. B. Almasri	October 2015