Medical Policy

BlueCross BlueShield of Kansas
An Independent Licensee of the Blue Cross and Blue Shield Association

Title: Home Phototherapy

Professional
Original Effective Date: February 1, 2004
Revision Date(s): April 21, 2005; July 1, 2005; March 7, 2006; January 11, 2007; December 11, 2013
Current Effective Date: April 1, 2007

Institutional
Original Effective Date: July 1, 2005
Revision Date(s): March 7, 2006; January 11, 2007; December 11, 2013
Current Effective Date: April 1, 2007

State and Federal mandates and health plan member contract language, including specific provisions/exclusions, take precedence over Medical Policy and must be considered first in determining eligibility for coverage. To verify a member's benefits, contact Blue Cross and Blue Shield of Kansas Customer Service.

The BCBSKS Medical Policies contained herein are for informational purposes and apply only to members who have health insurance through BCBSKS or who are covered by a self-insured group plan administered by BCBSKS. Medical Policy for FEP members is subject to FEP medical policy which may differ from BCBSKS Medical Policy.

The medical policies do not constitute medical advice or medical care. Treating health care providers are independent contractors and are neither employees nor agents of Blue Cross and Blue Shield of Kansas and are solely responsible for diagnosis, treatment and medical advice.

If your patient is covered under a different Blue Cross and Blue Shield plan, please refer to the Medical Policies of that plan.

DESCRIPTION

Home phototherapy is frequently used in the management of physiologic hyperbilirubinemia in the healthy term newborn. Phototherapy can be delivered using a special phototherapy lamp positioned over the baby's bed; a fiberoptic system also can be used. For example a fiberoptic cable attached to a transparent flat mat can be placed in direct contact with the infant's skin. Some may prefer Fiberoptic phototherapy, since exposure during feeding is not interrupted and protective eye pads are not needed.

POLICY

A. Home phototherapy should be considered for a healthy infant (lacks major risk factors) at 37 weeks or more gestation with neonatal jaundice and a serum bilirubin level as indicated:

1. 24 hours old with a level between 10 mg/dl to 12 mg/dl
2. 48 hours old with a level between 13 mg/dl to 15 mg/dl
3. 72 hours old with a level between 15 mg/dl to 17.5 mg/dl
4. 96 hours old with a level between 17 mg/dl to 20 mg/dl
5. 5 days and older with a level between 18 mg/dl to 21 mg/dl

These levels are for the initial determination for initiation of therapy and do not apply to subsequent days.

B. Infants with levels greater than those listed above consider hospitalization for phototherapy, as well as infants with major risk factors as listed:

1. Jaundice observed in the first 24 hours or,
2. Blood group incompatibility with positive direct antiglobulin test, other known hemolytic disease (e.g., G6PD deficiency) or,
3. Gestational age 35-36 weeks or less.

C. Bilirubin level:

1. Done at 72 hours of age on all infants at risk.
2. Done on a daily basis if the level is climbing.
3. Done at least every 48 hours when the bilirubin is dropping or stable.

D. Home health nurse visit for bilirubin levels blood draws is **not medically necessary** with home phototherapy. Training/instructions on the proper use of home phototherapy equipment is the responsibility of the vendor and is not separately reimbursable. If billed, this service/charge will be denied as not medically necessary.

DOCUMENTATION

Medical record must contain information surrounding co-morbidities, gestational age, weight, and feeding history for BCBSKS Medical Director or consultant to make a determination.

RATIONALE

While fluorescent lamps have been the most commonly used method of phototherapy treatment of hyperbilirubinemia, fiberoptic systems have also become available. Comparative studies have suggested that the decline in TSB in those using the fiberoptic system may not be as rapid as those using conventional fluorescent lights – which in 1 study consisted of 7 overhead lamps. Tan

reported on a study of 165 term health infants and 105 preterm infants with nonhemolytic hyperbilirubinemia who were assigned to receive either a fiberoptic blanket, overhead lamps, or a combination of the 2. (1) In term infants, the 24-hour TSB decline rate for fiberoptic, conventional, and combined therapy was 9.2%, 21.5%, and 29.9%, respectively. The decrease in efficacy of the fiberoptic system alone was thought to be related to the small size of the mat. In a subsequent 1997 study, Tan compared the efficacy of several different sizes of fiberoptic mats (standard, large, or 2 standard mats) and conventional phototherapy with 24 declines of 10.26%, 14%, 21%, and 19%, respectively. (2) However, both of these studies were done in the setting of the neonatal intensive care unit. In this setting, the speed of decline of the TSB might be clinically significant. However, the significance of the different rates of decline is uncertain in the home setting, where, by definition, the infants do not need intensive phototherapy and monitoring.

2004 Update

This update focuses on the 2004 guidelines for the management of hyperbilirubinemia in the healthy term newborn published by the American Academy of Pediatrics (AAP). The AAP first published guidelines for the management of hyperbilirubinemia in 1994, (3) which were reaffirmed in 2000. In 2004, the AAP updated these guidelines and provided new provisions for phototherapy including when home phototherapy would be appropriate and when phototherapy may be discontinued. (4) The updated guidelines focus on infants 35 weeks or more in gestation and specify that TSB levels be assessed in relation to the age of the infant in hours and risk level. At 48 hours of age, intensive phototherapy should begin at TSB levels of 11 mg/dL, 13 mg/dL or 15 mg/dL or above for high-, medium- and low-risk infants, respectively. At 72 hours of age, levels of TSB in infants requiring intensive phototherapy rise to 13 mg/dL, 15 mg/dL, and 18 mg/dL for high-, medium- and low-risk infants respectively.

The AAP indicates"intensive phototherapy implies the use of high levels of irradiance in the 430- to 490-nm band (usually 30 μW/cm² per nm or higher) delivered to as much of the infant's surface area as possible." In addition, special blue fluorescent tubes or specially designed light-emitting diode lights that emit predominately blue-green spectrum light are noted to be most effective.

The AAP specifies that providing conventional phototherapy either in the hospital or at home is an "option" at TSB levels that are 2–3 mg/dL below the intensive therapy levels but only in infants without risk factors. Infants with hyperbilirubinemia and any risk factors do not have the option for home phototherapy and require intensive phototherapy in the hospital setting. The AAP notes this is because home phototherapy devices may not provide levels of irradiance or surface-area exposure comparable to hospital devices. The risk factors for intensive phototherapy, as specified in the guidelines, are as follows:

- Isoimmune hemolytic disease;
- G6PD deficiency;
- Asphyxia;
- Significant lethargy;
- Temperature instability;
- Sepsis; and
- Acidosis.

The previous AAP guidelines did not indicate when phototherapy should stop. The 2004 guidelines indicate there is no standard for when phototherapy may be discontinued, since the cause of the hyperbilirubinemia and the age of the infant when phototherapy started must be taken into consideration. However, the guidelines also indicate phototherapy should be discontinued when TSB levels reach <13–14 mg/dL.

CODING

The following codes for treatment and procedures applicable to this policy are included below for informational purposes. Inclusion or exclusion of a procedure, diagnosis or device code(s) does not constitute or imply member coverage or provider reimbursement. Please refer to the member's contract benefits in effect at the time of service to determine coverage or non-coverage of these services as it applies to an individual member.

CPT/HCPCS

E0202 Phototherapy (bilirubin) light with photometer

S9098 Home visit, phototherapy services (e.g., Bili-lite), including equipment rental, nursing services, blood draw, supplies, and other services, per diem

DIAGNOSES

774.6 Unspecified fetal and neonatal jaundice

ICD-10 Diagnosis *(Effective October 1, 2014)*

P59.9 Neonatal jaundice, unspecified

REVISIONS

April 21, 2005	Deleted old policy and added new policy
March 7, 2006	In "Policy" section A, added "These levels are for the initial determination for initiation of therapy and do not apply to subsequent days."
	In "Coding" title, added "NOTE: Use of any diagnosis code does not guarantee reimbursement. Medical necessity will be based on documentation in the clinical record."
January 11, 2007 with an effective date of April 1, 2007	In "Policy" section D, added, "Training/instructions on the proper use of home phototherapy equipment is the responsibility of the vendor and is not separately reimbursable. If billed, this service/charge will be denied as not medically necessary" as recommended by the Medical Director.
	In "Coding" title, deleted "NOTE: Use of any diagnosis code does not guarantee reimbursement. Medical necessity will be based on documentation in the clinical record."

12-11-2013	Policy reviewed.
	Added Medical Policy and Coding Disclaimers
	In Coding section: ▪ Added ICD-10 Diagnosis codes *(Effective October 1, 2014)*
	Updated Reference section.

REFERENCES

1. Tan KL. Comparison of the efficacy of fiberoptic and conventional phototherapy for neonatal hyperbilirubinemia. J Pediatr 1994; 125(4):607-12.
2. Tan KL. Efficacy of bidirectional fiber-optic phototherapy for neonatal hyperbilirubinemia. Pediatrics 1997; 99(5):E13 (www.pediatrics.org/cgi/content/full/99/5/e13).
3. American Academy of Pediatrics. Practice parameter; Management of hyperbilirubinemia in the healthy term newborn. Pediatrics 1994; 94(4 pt 4):558-65.
4. 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.

Other references

1. Blue Cross and Blue Shield Association. Home Phototherapy for Neonatal Jaundice. Durable Medical Equipment 1.01.07. 10-08-02 pages 1 of 4.
2. Blue Cross and Blue Shield of Kansas Family Practice Liaison Committee meeting, July 22, 2003 (see Blue Cross and Blue Shield of Kansas Newsletter, Blue Shield Report. MAC–04-03).
3. Blue Cross and Blue Shield of Kansas Medical Advisory Committee meeting, November 6, 2003; (see Blue Cross and Blue Shield of Kansas Newsletter, Blue Shield Report. MAC–04-03).
4. Blue Cross and Blue Shield of Kansas Pediatrics Liaison Committee meeting, July 30, 2003 (see Blue Cross and Blue Shield of Kansas Newsletter, Blue Shield Report, MAC–04-03).