

## Clinical Policy: Home Phototherapy for Neonatal Hyperbilirubinemia

Reference Number: CP.MP.150

Last Review Date: 10/20

[Coding Implications](#)

[Revision Log](#)

See [Important Reminder](#) at the end of this policy for important regulatory and legal information.

### Description

This policy details medical necessity criteria for home phototherapy for the treatment of neonatal hyperbilirubinemia. Almost all newborns will develop total serum bilirubin (TSB) levels greater than the upper limit of normal for adults, 1 mg/dL. Increasing TSB can cause jaundice, and newborns with severe hyperbilirubinemia are at risk for developing acute neurotoxicity as bilirubin crosses the blood-brain barrier. Acute bilirubin-induced neurologic dysfunction (BIND) can have chronic and permanent neurologic effects, termed kernicterus. Thus, screening for hyperbilirubinemia should be conducted on all infants prior to discharge.

### Policy/Criteria

- I. It is the policy of health plans affiliated with Centene Corporation® that conventional phototherapy in the home, applied by a single light source in the blue-green spectrum, for the treatment of physiologic hyperbilirubinemia in *term* ( $\geq 38$  weeks gestation) infants is **medically necessary** when meeting all of the following guidelines:
  - A. Term infant status is one of the following:
    1. Previously discharged home and readmission is being considered only for hyperbilirubinemia;
    2. Infant is currently inpatient and ready for discharge except for needing treatment for elevated bilirubin;
  - B. The infant is feeding well, is active, and appears well;
  - C. If the mother is breastfeeding, she has been offered lactation support from a qualified professional;
  - D. A primary provider is willing to manage home care with established follow-up within the next 24-48 hours;
  - E. Infant has none of the following risk factors:
    1. Isoimmune hemolytic disease
    2. Glucose-6-phosphate dehydrogenase (G6PD) deficiency
    3. Asphyxia
    4. Significant lethargy
    5. Temperature instability
    6. Sepsis
    7. Acidosis
    8. Albumin  $< 3.0$  g/dL (if measured)
    9. Birth weight  $< 2500$ g
    10. Significant cephalohematoma or bruising
    11. Weight loss  $>10\%$
    12. Elevated direct-reacting bilirubin
    13. Jaundice appearance in first 24 hours of life
    14. Laboratory or clinical evidence of hypothyroidism
  - F. TSB is within the levels noted in Table 1 below<sup>1</sup>:

# CLINICAL POLICY

## Home Phototherapy for Neonatal Hyperbilirubinemia

**Table 1. Acceptable TSB levels for home phototherapy in infants without risk factors, by age**

| Age         | TSB Level  |
|-------------|------------|
| 24-36 hours | ≤ 11 mg/dL |
| 36-48 hours | ≤ 14 mg/dL |
| 48-60 hours | ≤ 15 mg/dL |
| 60-72 hours | ≤ 16 mg/dL |
| >72 hours   | ≤ 17 mg/dL |

**II.** It is the policy of Centene Corporation that when criteria for home phototherapy are met, inpatient phototherapy for hyperbilirubinemia is **not medically necessary** unless documentation of extenuating circumstances is provided.

**III.** It is the policy of Centene Corporation that other treatment for hyperbilirubinemia, including inpatient phototherapy and exchange transfusion, is **medically necessary** when meeting the most current version of the relevant nationally recognized decision support tools.

### Background

Efforts to reduce kernicterus include prevention and management of hyperbilirubinemia. Preventive strategies focus on identifying at-risk infants and beginning preventive therapeutic interventions as needed, usually through universal screening of all neonates for hyperbilirubinemia, which may be performed by measurement of TSB or by use of a transcutaneous device.<sup>2</sup>

Phototherapy is considered first-line treatment for neonatal hyperbilirubinemia, defined as TSB > 95<sup>th</sup> percentile on the hour-specific Bhutani nomogram for infants ≥35 weeks gestational age (GA).<sup>1</sup> Phototherapy has been used widely for over 60 years and has been associated with few adverse events in term infants. Phototherapy decreases or reduces the rate of rise of bilirubinemia in almost all cases, regardless of the cause.<sup>2</sup> At the same time, it reduces the risk that TSB will reach the level at which exchange transfusion is recommended, and which is associated with increased risk of kernicterus.

Conventional phototherapy is delivered by a single light source, and intensive phototherapy is delivered by irradiance in the blue-green spectrum (wavelengths of approximately 430–490 nm) of at least 30 μW/cm<sup>2</sup> per nm (measured at the infant’s skin directly below the center of the phototherapy unit) and delivered to as much of the infant’s surface area as possible.<sup>3</sup> Furthermore, conventional phototherapy may be delivered in the hospital setting or in the home.<sup>4</sup>

Some infants are more likely than others to be readmitted for treatment of hyperbilirubinemia after discharge from the birth hospitalization.<sup>5</sup> Infants discharged in the first two days after birth were more likely to be readmitted for jaundice compared with infants who stayed ≥ 3 days, an association that decreased with increasing GA.<sup>6</sup> Other risk factors identified were being born via vaginal delivery, being exclusively breastfed at discharge, being born to a primiparous mother,

## CLINICAL POLICY

### Home Phototherapy for Neonatal Hyperbilirubinemia

having a mother aged <20 years being born to a mother who had an Asian country of birth, and higher TSB relative to the treatment threshold at phototherapy initiation.<sup>5,6</sup>

#### *American Academy of Pediatrics (AAP)*<sup>1</sup>

In 2004, the AAP issued updated clinical practice guidelines concerning the assessment and treatment of neonatal hyperbilirubinemia in infants  $\geq 35$  weeks. They recommend support and promotion of successful breastfeeding; assessment for severe hyperbilirubinemia before discharge; early follow up based on risk of hyperbilirubinemia; and treatment with phototherapy and/or exchange transfusion to prevent BIND in infants at risk.

#### *National Institute for Health and Care Excellence (NICE)*<sup>7</sup>

NICE guidelines cover diagnosing and treating jaundice in order to detect and prevent very high levels of bilirubin. They provide consensus-based thresholds for when phototherapy and exchange transfusion should be initiated, by age in hours.

#### *United States Preventive Services Task Force (USPSTF)*<sup>8</sup>

The USPSTF stated there was insufficient evidence to make recommendations regarding screening for hyperbilirubinemia for infants  $\geq 35$  weeks. They note that risk factors for hyperbilirubinemia include family history of neonatal jaundice, exclusive breastfeeding, bruising, cephalohematoma, ethnicity (Asian or black), maternal age older than 25 years, male sex, glucose-6-phosphate dehydrogenase deficiency, and gestational age less than 38 weeks. The specific contribution of these risk factors to chronic bilirubin encephalopathy in healthy children is not well understood. Currently, the USPSTF notes this recommendation is “inactive”.

### Coding Implications

This clinical policy references Current Procedural Terminology (CPT®). CPT® is a registered trademark of the American Medical Association. All CPT codes and descriptions are copyrighted 2019, American Medical Association. All rights reserved. CPT codes and CPT descriptions are from the current manuals and those included herein are not intended to be all-inclusive and are included for informational purposes only. Codes referenced in this clinical policy are for informational purposes only. Inclusion or exclusion of any codes does not guarantee coverage. Providers should reference the most up-to-date sources of professional coding guidance prior to the submission of claims for reimbursement of covered services.

| CPT® Codes | Description |
|------------|-------------|
| N/A        |             |

| HCPCS Codes | Description   |
|-------------|---|
| 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 |

### ICD-10-CM Diagnosis Codes that Support Coverage Criteria

## CLINICAL POLICY

### Home Phototherapy for Neonatal Hyperbilirubinemia

| ICD-10-CM Code | Description  |
|----------------|--|
| P55.0-P55.9    | Hemolytic disease of newborn                                       |
| P58.0-P58.9    | Neonatal jaundice due to other excessive hemolysis                 |
| P59.20-P59.9   | Neonatal jaundice from other and unspecified hepatocellular damage |

| Reviews, Revisions, and Approvals  | Date  | Approval Date |
|--|-------|---------------|
| New policy   | 12/17 | 12/17         |
| References reviewed and updated. Codes reviewed.   | 10/18 | 10/18         |
| References reviewed and updated. Specialist review.  | 10/19 | 10/19         |
| Added criterion that “if the mother is breastfeeding, she has been offered lactation support from a qualified professional.” References reviewed and updated. Specialist review. Replaced “member” with “member/enrollee in all instances. | 10/20 | 10/20         |

#### References

1. 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.
2. Morris BH, Oh W, Tyson JE, et al. Aggressive vs. conservative phototherapy for infants with extremely low birth weight. *New Engl J Med* 2008; 359: 1885-1886.
3. Kumar, P., Chawla, D. and Deorari, A., 2011. Light-emitting diode phototherapy for unconjugated hyperbilirubinaemia in neonates. *Cochrane Database of Systematic Reviews*.
4. Snook, J., 2017. Is home phototherapy in the term neonate with physiological jaundice a feasible practice? A systematic literature review. *Journal of Neonatal Nursing*, 23(1), pp.28-39.
5. Chang, P. and Waite, W., 2020. Evaluation of Home Phototherapy for Neonatal Hyperbilirubinemia. *The Journal of Pediatrics*, 220, pp.80-85.
6. Lain SJ, Roberts CL, Bowen JR, Nassar N. Early discharge of infants and risk of readmission for jaundice. *Pediatrics*. 2015 Feb;135(2):314-321.
7. Jaundice in newborn babies under 28 days - Clinical guideline CG98. National Institute for Health and Care Excellence (NICE) website. <https://www.nice.org.uk/guidance/cg98>. Published May 19, 2010 (updated October 26, 2016). Accessed September 30, 2020.
8. 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.(Inactive)
9. Maisels MJ, Bhutani VK, Bogen D, et al. Hyperbilirubinemia in the Newborn Infant  $\geq$  35 Weeks' Gestation: An Update with Clarifications. *Pediatrics*. 2009 Oct;124(4):1193-8. doi: 10.1542/peds.2009-0329. Epub 2009 Sep 28.
10. Maisels MJ, Watchko JF, Bhutani VK, Stevenson DK. An approach to the management of hyperbilirubinemia in the preterm infant less than 35 weeks of gestation. *Journal of Perinatology* (2012) 32, 660–664; doi:10.1038/jp.2012.71; published online 7 June 2012.
11. Morris BH, Oh W, Tyson JE, et al. Aggressive vs. conservative phototherapy for infants with extremely low birth weight. *New Engl J Med* 2008; 359: 1885-1886.

**CLINICAL POLICY****Home Phototherapy for Neonatal Hyperbilirubinemia**

12. Bhutani VK, Wong RJ. Unconjugated hyperbilirubinemia in the preterm infant (less than 35 weeks gestation). UpToDate website. www.uptodate.com. Published July 14, 2020. Accessed September 30, 2020.
13. Johnson L, Bhutani VK, Karp K, et al. Clinical report from the pilot USA Kernicterus Registry (1992 to 2004). J Perinatol. 2009 Feb;29 Suppl 1:S25-45. doi: 10.1038/jp.2008.211.
14. American Academy of Pediatrics and American College of Obstetrics and Gynecology. Guidelines for Perinatal Care: 8th Edition. Elk Grove Village, IL. 2012.
15. Chu, L., Qiao, J. and Xu, C., 2020. Home-Based Phototherapy versus Hospital-Based Phototherapy for Treatment of Neonatal Hyperbilirubinemia: A Systematic Review and Meta-Analysis. Clinical Pediatrics, 59(6), pp.588-595.

**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. The Health Plan 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. “Health Plan” means a health plan that has adopted this clinical policy and that is operated or administered, in whole or in part, by Centene Management Company, LLC, or any of such health plan’s affiliates, as applicable.

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 Health Plan-level administrative policies and procedures.

This clinical policy is effective as of the date determined by the Health Plan. 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. The Health Plan 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/enrollees. This clinical policy is not intended to recommend treatment for members/enrollees. Members/enrollees should consult with their treating physician in connection with diagnosis and treatment decisions.

## CLINICAL POLICY

### Home Phototherapy for Neonatal Hyperbilirubinemia



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

This clinical policy is the property of the Health Plan. Unauthorized copying, use, and distribution of this clinical policy or any information contained herein are strictly prohibited. Providers, members/enrollees and their representatives are bound to the terms and conditions expressed herein through the terms of their contracts. Where no such contract exists, providers, members/enrollees and their representatives agree to be bound by such terms and conditions by providing services to members/enrollees and/or submitting claims for payment for such services.

**Note: For Medicaid members/enrollees**, when state Medicaid coverage provisions conflict with the coverage provisions in this clinical policy, state Medicaid coverage provisions take precedence. Please refer to the state Medicaid manual for any coverage provisions pertaining to this clinical policy.

**Note: For Medicare members/enrollees**, to ensure consistency with the Medicare National Coverage Determinations (NCD) and Local Coverage Determinations (LCD), all applicable NCDs, LCDs, and Medicare Coverage Articles should be reviewed prior to applying the criteria set forth in this clinical policy. Refer to the CMS website at <http://www.cms.gov> for additional information.

©2017 Centene Corporation. All rights reserved. All materials are exclusively owned by Centene Corporation and are protected by United States copyright law and international copyright law. No part of this publication may be reproduced, copied, modified, distributed, displayed, stored in a retrieval system, transmitted in any form or by any means, or otherwise published without the prior written permission of Centene Corporation. You may not alter or remove any trademark, copyright or other notice contained herein. Centene® and Centene Corporation® are registered trademarks exclusively owned by Centene Corporation.