Pediatric ED Triage Protocol: Neonatal Jaundice

This information is meant as a guideline only and not a substitute for physician order or clinical judgement.

Inclusion Criteria:
- Age < 14 days
- Previously healthy
- Born at ≥ 35 weeks gestation
- Presentation or report of elevated bilirubin or jaundice

Exclusion Criteria:
- Presents with hypo/hyperthermia (temperature < 36°C or ≥ 38°C) per rectal temperature
- Ill appearing or suspected sepsis
- Direct hyperbilirubinemia
- Hyperbilirubinemia at < 24 hours of life

Does patient meet protocol criteria?

NO → OFF Pathway
YES

1. Assign ESI Level 2
2. Apply heel warms upon arrival
3. Room immediately & notify physician/APC of patient arrival

Order and obtain STAT Bilirubin Panel: Total & Direct, heel stick preferred
Consider bedside blood glucose if concern for poor feeding
GOAL = 15 minutes from triage

Initiate Intensive Phototherapy
- Remove clothing except diaper, place eye covers
- Bili-blanket + overhead light
- Initiate temperature monitoring → GOAL = 30 minutes from triage

Temperature Monitoring
- Correlate rectal baseline temp with an axillary temp
- Obtain axillary temp every 15 mins x 1 hour then every 2 hrs
- If patient unable to maintain normal temp (< 36°C or ≥ 38°C), confirm by obtaining rectal temp and inform physician immediately

Promote Oral Feeding (breastmilk or formula)
- If breastfeeding, limit feed to less than 20 mins in duration. Remove overhead light. Maintain bili-blanket, eye cover, and swaddle.
- Continue intensive phototherapy if bottle fed.
- Monitor I & O – record time breastfeeding, weigh diapers.

If known TSB level is nearing exchange transfusion threshold, DO NOT interrupt intensive phototherapy.

Link to ED/Inpatient Management Guidelines

Link to References

Time Chart

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Inpatient General Pediatric Protocol: Neonatal Jaundice

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Does patient meet protocol criteria?  

YES

1. Set up room – open crib or cribette, Bili-blanket + overhead light
2. Notify physician/APC of patient arrival
3. Apply heel warmers upon arrival

**Intensive Phototherapy**

Spectral irradiance of at least 30 μW/cm²/nm with bandwidth of 430-490nm delivered over >75% body surface area

**Order and obtain STAT Bilirubin Panel: Total & Direct**, heel stick preferred
**Consider bedside blood glucose if concern for poor feeding**

**GOAL = 15 to 30 minutes** from patient arrival

**Initiate Intensive Phototherapy**
- Remove clothing except diaper, place eye covers
- **Bili-blanket + overhead light**
- Initiate temperature monitoring →
  **GOAL = 30 minutes** from patient arrival

**Temperature Monitoring**
- Correlate rectal baseline temp with an axillary temp
- Obtain axillary temp every 15 mins x 1 hour then every 2 hrs
- If patient unable to maintain normal temp (< 36°C or ≥ 38°C), confirm by obtaining rectal temp

**Promote Oral Feeding (breastmilk or formula)**
- If breastfeeding, limit feed to less than 20 mins in duration. Remove overhead light. Maintain bili-blanket, eye cover, and swaddle.
- Continue intensive phototherapy if bottle fed.
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If known TSB level is nearing exchange transfusion threshold, **DO NOT** interrupt intensive phototherapy.
Neonatal Jaundice Pathway: ED/Inpatient Management Guidelines

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**Neurotoxicity Risk Factors**
- Isoimmune hemolytic disease - ABO or Rh incompatibility + evidence of hemolysis (+Coombs, elevated retic)
- Asphyxia
- Significant lethargy
- Temperature instability
- Sepsis
- Acidosis
- Albumin <3.0g/dL

**Initial Assessment**
- History including:
  - Gestational age at birth
  - Time of birth/Age in hours of life
  - Weight and % change from birth weight
  - Adequacy of intake
  - Mom’s blood type
- Consider further labs‡:
  - ABO
  - Rh
  - Coombs

**Utilize BiliTool for phototherapy and transfusion exchange threshold**

**Evaluation for Discharge:**
- TSB below phototherapy threshold
- Feeding adequately (q 2-3h)
- Weight loss not greater than 10% from BW
- Follow up appointment scheduled per BiliTool recommendation
- No concern for hemolysis

**Inpatient Floor Admission Criteria:**
- TSB at or above phototherapy threshold
- If within 2 mg/dL of exchange transfusion threshold, NICU consult required

**NICU Consult Criteria:**
- TSB within 2 mg/dL of exchange transfusion level

**ICU Admission Criteria:**
- TSB above exchange transfusion threshold
- Signs of acute bilirubin encephalopathy

**Follow Inpatient Management Guidelines**

**Care is continued from Inpatient General Pediatric Protocol and Pediatric ED Triage Protocol**

- Continue Intensive Phototherapy: Bili-blanket + spot light
- Temperature monitoring †
- Promote oral feeding every 2-3 hr. If breastfeeding, do not remove from phototherapy for more than 20min every 3h.
  - Remove overhead light and maintain bili-blanket, eye cover, and swaddle

**Temperature Monitoring**
- Correlate rectal baseline temp with an axillary temp
- Obtain axillary temp every 15 mins x 1 hour then every 2 hrs
- If patient unable to maintain normal temp, off pathway

**If patient was born at facility can be obtained from newborn admission**

**IV not routinely indicated**

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Inpatient Management Guidelines

- Encourage feeding q2-3h - if breastfeeding do not remove from phototherapy for more than 20min every 3h
- Continue Intensive Phototherapy: Bili-blanket + overhead light
- Consider lactation consultation

Bilirubin not improving as expected, consider:
- CBC
- Retic
- G6PD level (if appropriate ethnic group)
- Assessment for sepsis
- CMP for albumin level

Evaluate for Discharge:
- TSB below phototherapy threshold
- Feeding adequately (q2-3h)
- Follow up appointment scheduled per Bili tool recommendation
- Rebound TSB not routinely indicated

TSB within 2 mg/dL of exchange transfusion threshold
- Recheck total bilirubin in 4 hours

TSB within 2-4 mg/dL of exchange transfusion threshold
- Recheck total bilirubin in 6 hours

TSB > 4 mg/dL below exchange transfusion threshold or down trending
- Recheck total bilirubin in 8-12 hours or with routine AM labs

Recheck total bilirubin in 4 hours
Recheck total bilirubin in 6 hours
Recheck total bilirubin in 8-12 hours or with routine AM labs

IV not routinely indicated

Link to References
Neonatal Jaundice

References


Flynn, M. E. (2017). A quality improvement project to decrease the serum bilirubin and increase appropriate phototherapy use by following the AAP guidelines in a well nursery. Pediatric Nursing, 43(3), 143–148.


