

Section B — NICU: Neonatal Intensive Care

Source document: Curative Health Plan — Master Clinical Decision Criteria / Unified Reviewer Tool, Version 2.0 (Effective March 4, 2026)

Section: B of G (part of a 7-document set, A-G)

Conditions / procedures in this section: 14

Scope: 14 neonatal intensive care conditions.

Use: Internal utilization-management criteria. Automated systems may approve but must not issue adverse determinations; all denials require licensed clinician review.

EXTREME PREMATURITY (<28 WEEKS GA / <1000G)

ICD-10-CM: P07.01 (extremely low birth weight less than 500g), P07.02 (extremely low birth weight 500-749g), P07.03 (extremely low birth weight 750-999g), P07.20 (extreme immaturity unspecified weeks), P07.21 (extreme immaturity less than 23 completed weeks), P07.22 (23 completed weeks), P07.23 (24 completed weeks), P07.24 (25 completed weeks), P07.25 (26 completed weeks), P07.26 (27 completed weeks), Z38.00 (single liveborn delivered vaginally), Z38.01 (single liveborn delivered by cesarean), Z38.30 (twin liveborn delivered vaginally), Z38.31 (twin liveborn delivered by cesarean)

A. ADMISSION CRITERIA — Severity of Illness (SI) / Intensity of Service (IS) SEVERITY OF ILLNESS (SI) — Must meet ≥ 1 :

- Gestational age <28 completed weeks of gestation
- Birth weight <1000 grams (extremely low birth weight)
- Requires NRP (Neonatal Resuscitation Program) intervention at delivery
- Surfactant deficiency (RDS virtually universal at <28 weeks gestation)
- Thermoregulatory instability (cannot maintain temperature without isolette/radiant warmer)
- Apnea of prematurity (immature brainstem respiratory drive)
- Cannot coordinate suck-swallow-breathe (feeding intolerance requiring gavage or TPN)
- High risk for IVH (25-30% at <28 wks), NEC (5-10%), PDA (40-60%), ROP, BPD, sepsis

INTENSITY OF SERVICE (IS) — Must meet ≥ 1 :

- Mechanical ventilation (HFOV or conventional) or nasal CPAP or HFNC from delivery room
- Surfactant administration within 2 hours (poractant alfa 200mg/kg, beractant 100mg/kg, or calfactant 105mg/kg)
- Umbilical arterial catheter (UAC) for continuous BP monitoring and arterial blood gas sampling
- Umbilical venous catheter (UVC) or PICC for IV access and TPN administration
- Total parenteral nutrition (TPN) with intralipids initiated within 24 hours of life
- Continuous cardiorespiratory monitoring with pulse oximetry (target SpO₂ 90-95% per SUPPORT/BOOST trials)
- Thermoregulated isolette (target axillary temp 36.5-37.5°C)
- Caffeine citrate loading dose 20mg/kg then 5-10mg/kg/day maintenance for apnea of prematurity
- NICU Level III minimum; Level IV if <25 weeks or anticipated surgical needs (per AAP Levels of Care)
- 1:1 or 1:2 nurse-to-patient ratio

B. OBSERVATION vs INPATIENT DECISION MATRIX

ALWAYS INPATIENT — No observation for confirmed extreme prematurity

- All infants <28 weeks require emergent NICU admission
- NICU Level III minimum (Level IV if <25 weeks or surgical needs anticipated)
- Transfer to higher-level NICU if born at facility without appropriate level

DOES NOT MEET CRITERIA / NOT MEDICALLY NECESSARY:

- Continued NICU stay when ALL discharge criteria (Section D) are met
- NICU admission solely for observation of a well-appearing term or late-preterm infant without SI indicators
- Continued stay solely for weight gain when otherwise stable, feeding well, thermoregulating in open crib
- Continued stay solely awaiting car seat challenge when all other criteria met
- Continued stay solely for parental education when infant is otherwise discharge-ready
- Stay for social/placement reasons when medically ready for discharge

C. CONTINUED STAY / CONCURRENT REVIEW

REVIEW INTERVAL: Daily by neonatologist

WEEK 1:

- Surfactant dosing (may need 2-3 doses in first 72 hours)
- Ventilator management (target SpO₂ 90-95% per SUPPORT/BOOST trials)
- Head ultrasound day 3-7 (IVH screening)
- TPN with lipids initiated within 24 hours
- Trophic feeds started at 24-48 hours (maternal breast milk preferred, 10-20 mL/kg/day)
- PDA screening echo day 3-5

WEEK 2-4:

- Ventilator weaning trajectory: HFOV → conventional → CPAP → HFNC → room air
- Advancing enteral feeds (goal full feeds 140-160 mL/kg/day by 2-4 weeks)
- NEC surveillance (abdominal distension, feeding intolerance, bloody stools)
- Repeat head US at 2 weeks and 4 weeks
- ROP screening begins at 31 weeks PMA or 4 weeks chronological age (whichever later)

CONTINUED NICU STAY JUSTIFIED IF ANY:

- On any respiratory support (ventilator, CPAP, HFNC >0.5L, supplemental O₂)
- On TPN or not yet on full enteral feeds
- Thermoregulation requiring isolette (cannot maintain temp in open crib)
- Apnea/bradycardia/desaturation events within past 5-7 days
- Active infection requiring IV antibiotics
- Hemodynamically significant PDA requiring treatment
- IVH with developing hydrocephalus
- Active NEC (NPO, IV antibiotics, surgical evaluation)
- Awaiting or recovering from ROP treatment
- Post-surgical recovery

D. DISCHARGE CRITERIA — Safe Transition to Next Level of Care

ALL of the following must be met:

- Sustained oral feeding sufficient for growth (≥ 20 -30 g/day x 3+ consecutive days)
- Thermoregulation in open crib for ≥ 24 -48 hours (axillary temp 36.5-37.5°C)
- No clinically significant apnea/bradycardia/desaturation for 5-7 days (event-free)
- Stable respiratory status: room air or manageable home O₂ (≤ 0.5 L NC with SpO₂ $\geq 90\%$)
- Weight trending upward consistently (≥ 20 -30 g/day), typically >1800-2000g at discharge
- Car seat challenge passed (90-120 min per AAP)
- Hearing screen completed (AABR)
- ROP screening current with ophthalmology follow-up scheduled
- Immunizations up to date for chronological age
- Newborn metabolic screen completed
- Parents demonstrated competency in: feeding, medication administration, infant CPR, monitor use if applicable
- Early intervention referral submitted
- Follow-up: pediatrician within 48-72 hours, ophthalmology, audiology, subspecialists as indicated

E. EVIDENCE SOURCES

1. AAP Committee on Fetus and Newborn: Hospital Discharge of the High-Risk Neonate. *Pediatrics*. 2008;122:1119-1126. Reaffirmed 2022.
2. SUPPORT Trial (Target SpO₂ in Preterms). SUPPORT Study Group. *NEJM*. 2010;362:1959-1969.
3. BOOST II Trial. BOOST II Collaborative. *NEJM*. 2013;368:2094-2104.
4. AAP Policy: Levels of Neonatal Care. *Pediatrics*. 2012;130:587-597. Updated 2023.
5. Caffeine for Apnea of Prematurity (CAP) Trial. Schmidt B, et al. *NEJM*. 2006;354:2112-2121.

F. MS-DRG CROSSWALK & REVENUE CODES

MS-DRG CROSSWALK (FY2024, v41):

- DRG 790: Extreme Immaturity or Respiratory Distress Syndrome, Neonate (RW ~4.54)
- DRG 791: Prematurity w Major Problems (RW ~3.24)
- DRG 792: Prematurity w/o Major Problems (RW ~2.01)
- DRG 789: Neonates, Died or Transferred (RW ~1.34)

REVENUE CODES (UB-04):

- 0173: Nursery — Newborn Level III (NICU)
- 0174: Nursery — Newborn Level IV (Regional NICU)
- 0250: Pharmacy (surfactant, caffeine, antibiotics, TPN)
- 0270: Medical/Surgical Supplies (UAC/UVC, PICC line)
- 0300: Laboratory (ABG, CBC, CMP, blood culture, bilirubin)
- 0410: Respiratory Services (ventilator, CPAP, HFNC, surfactant administration)
- 0636: Drugs Requiring Detailed Coding (surfactant ~\$900-1500/dose)

G. GOAL LENGTH OF STAY (UNCOMPLICATED CASE)

Goal LOS: 60-120 days Source: AAP Levels of Neonatal Care (2023); CMS MS-DRG 789-790 ($\leq 28w$ GMLOS $\sim 85d$)

H. LEVEL OF CARE (LOC) GRID — PUBLIC-SOURCE STANDARDIZED CRITERIA

- ICU (NICU Level III/IV): Mechanical ventilation, HFOV/HFJV/iNO, vasoactives, therapeutic hypothermia, ECMO, post-cardiac surgery, surgical NEC, GA < 32 weeks or BW < 1500 g per AAP Level III; complex congenital surgery requires Level IV.
- Stepdown (NICU Level II): CPAP/HFNC, gavage feeds advancing, weight gaining, on antibiotics, monitoring for apnea of prematurity per AAP Level II.
- Med-Surg (Newborn Nursery / Continuing Care): Term/late preterm with stable VS, oral feeds, room air, weight gaining, awaiting discharge teaching.
- Observation: Generally not applicable; well-baby observation falls under newborn nursery billing.
- Post-Acute (Home, with or without HHA / Level II step-down): May transition to Level II hospital closer to home prior to discharge.
- Home (with/without HHA): Per AAP discharge criteria: stable in open crib, feeding orally with weight gain, room air or stable home O₂, parental competency, car-seat test passed, follow-up pediatrics/neonatology in 1 week; HHA for home apnea monitor, oxygen, NG feeds.

LOC Grid Sources: AAP Levels of Neonatal Care (2023, Pediatrics 152:e2023061851); AAP Hospital Discharge of the High-Risk Neonate (2008, reaffirmed 2022); CMS MS-DRG 789-795.

I. EXTENDED STAY CRITERIA & GUIDANCE

When Goal LOS is exceeded, continued inpatient stay requires documentation of ONE OR MORE of the following medical-necessity triggers. Document the specific trigger, the clinical evidence supporting it, and the targeted intervention plan.

- Continued respiratory support (CPAP, HFNC, supplemental O₂) without weaning to room air
- Apnea of prematurity not yet resolved (event-free interval not yet met per AAP)
- Inability to achieve full oral feeds and weight gain in open crib
- Newly identified comorbidity (e.g., ROP requiring laser, IVH progression, BPD)
- Failure of parent/caregiver education and competency demonstration

Extended Stay Sources: Sources: AAP Levels of Neonatal Care (2023); AAP Hospital Discharge of the High-Risk Neonate (2008, reaffirmed 2022).

RESPIRATORY DISTRESS SYNDROME (RDS) / SURFACTANT THERAPY

ICD-10-CM: P22.0 (respiratory distress syndrome of newborn), P22.1 (transient tachypnea of newborn), P22.8 (other respiratory distress of newborn), P22.9 (respiratory distress unspecified), P28.0 (primary atelectasis of newborn), P28.5 (respiratory failure of newborn), P28.81 (respiratory arrest of newborn)

A. ADMISSION CRITERIA — Severity of Illness (SI) / Intensity of Service (IS)

SEVERITY OF ILLNESS (SI) — Must meet ≥ 1 :

- Preterm infant with tachypnea (RR > 60), grunting, nasal flaring, intercostal/subcostal retractions within first 6 hours
- CXR: diffuse ground-glass opacities with air bronchograms, low lung volumes
- FiO₂ requirement > 0.30 to maintain target SpO₂ (90-95% preterm, $> 95\%$ term)
- Silverman-Anderson Retraction Score ≥ 4 (moderate-severe, scale 0-10)
- Blood gas: pH < 7.25 , PaCO₂ > 55 mmHg, or PaO₂ < 50 on room air
- Increasing O₂ requirement: FiO₂ > 0.40 on CPAP (European Consensus surfactant threshold)

INTENSITY OF SERVICE (IS) — Must meet ≥ 1 :

- Surfactant administration via ETT or LISA/MIST technique
- Mechanical ventilation (conventional or HFOV) with lung-protective strategy (Vt 4-6 mL/kg)
- Nasal CPAP ≥ 6 cmH₂O
- Continuous pulse oximetry with SpO₂ target titration

- Arterial blood gas monitoring via UAC (q4-6h minimum)
- NICU-level nursing (1:1 or 1:2 ratio)

B. OBSERVATION vs INPATIENT DECISION MATRIX

ALWAYS NICU for confirmed RDS requiring surfactant or ventilatory support

DOES NOT MEET CRITERIA:

- Mild tachypnea (RR 60-80) with FiO₂ ≤0.30 improving within 2 hours → likely TTN, well-baby nursery with monitoring
- TTN resolving within 24-48h without FiO₂ >0.40 or CPAP >5 → step-down
- Term infant with transient grunting resolving with initial stabilization → well-baby nursery
- Continued NICU when on room air, no distress, stable >24h → transition to intermediate or discharge

C. CONTINUED STAY / CONCURRENT REVIEW

DAILY review. DAY 1: Surfactant within 2h if intubated; repeat at 6-12h if FiO₂ >0.30 on CPAP (max 3 doses). DAY 2-3: Wean FiO₂/support. Extubate to CPAP when FiO₂ <0.30, MAP <8, caffeine on board. DAY 3-7: Most uncomplicated RDS resolves by day 3-5 in >30 week infants.

CONTINUED STAY IF: Cannot wean ventilator/CPAP, recurrent surfactant need, developing BPD, PDA complicating course, air leak syndrome

D. DISCHARGE CRITERIA — Safe Transition to Next Level of Care

- Room air or low-flow NC (≤0.5L) with stable SpO₂ ≥90%
- No respiratory distress (RR <60, no retractions/grunting)
- Tolerating full enteral feeds with appropriate weight gain
- Stable ≥24-48 hours on current respiratory status

E. EVIDENCE SOURCES

1. European Consensus Guidelines on RDS 2022. Sweet DG, et al. Neonatology. 2023;120:3-23.
2. AAP: Surfactant Replacement Therapy. Polin RA, Carlo WA. Pediatrics. 2014;133:156-163.
3. COIN Trial. Morley CJ, et al. NEJM. 2008;358:700-708.

F. MS-DRG CROSSWALK & REVENUE CODES

MS-DRG: DRG 790 (Extreme Immaturity/RDS RW ~4.54), DRG 791 (Prematurity w Major Problems RW ~3.24), DRG 793 (Full Term w Major Problems RW ~1.58)

REVENUE CODES: 0173-0174 (NICU), 0410 (Respiratory), 0250 (Pharmacy — surfactant), 0636 (Drugs — surfactant ~\$900-1500/dose), 0300 (Lab)

G. GOAL LENGTH OF STAY (UNCOMPLICATED CASE)

Goal LOS: 7-21 days Source: AAP Surfactant Replacement Therapy (2014); CMS MS-DRG 793

H. LEVEL OF CARE (LOC) GRID — PUBLIC-SOURCE STANDARDIZED CRITERIA

- ICU (NICU Level III/IV): Mechanical ventilation, HFOV/HFJV/iNO, vasoactives, therapeutic hypothermia, ECMO, post-cardiac surgery, surgical NEC, GA <32 weeks or BW <1500 g per AAP Level III; complex congenital surgery requires Level IV.
- Stepdown (NICU Level II): CPAP/HFNC, gavage feeds advancing, weight gaining, on antibiotics, monitoring for apnea of prematurity per AAP Level II.
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- Observation: Generally not applicable; well-baby observation falls under newborn nursery billing.
- Post-Acute (Home, with or without HHA / Level II step-down): May transition to Level II hospital closer to home prior to discharge.
- Home (with/without HHA): Per AAP discharge criteria: stable in open crib, feeding orally with weight gain, room air or stable home O₂, parental competency, car-seat test passed, follow-up pediatrics/neonatology in 1 week; HHA for home apnea monitor, oxygen, NG feeds.

LOC Grid Sources: AAP Levels of Neonatal Care (2023, Pediatrics 152:e2023061851); AAP Hospital Discharge of the High-Risk Neonate (2008, reaffirmed 2022); CMS MS-DRG 789-795.

I. EXTENDED STAY CRITERIA & GUIDANCE

When Goal LOS is exceeded, continued inpatient stay requires documentation of ONE OR MORE of the following medical-necessity triggers. Document the specific trigger, the clinical evidence supporting it, and the targeted intervention plan.

- Continued respiratory support (CPAP, HFNC, supplemental O₂) without weaning to room air
- Apnea of prematurity not yet resolved (event-free interval not yet met per AAP)
- Inability to achieve full oral feeds and weight gain in open crib
- Newly identified comorbidity (e.g., ROP requiring laser, IVH progression, BPD)

- Failure of parent/caregiver education and competency demonstration

Extended Stay Sources: Sources: AAP Levels of Neonatal Care (2023); AAP Hospital Discharge of the High-Risk Neonate (2008, reaffirmed 2022).

NEONATAL SEPSIS — EARLY-ONSET AND LATE-ONSET

ICD-10-CM: P36.0 (sepsis due to group B streptococcus), P36.10 (sepsis due to other/unspecified streptococci), P36.19 (sepsis due to other streptococci), P36.2 (sepsis due to Staphylococcus aureus), P36.30 (sepsis due to other/unspecified staphylococci), P36.39 (sepsis due to other staphylococci), P36.4 (sepsis due to E. coli), P36.5 (sepsis due to anaerobes), P36.8 (other bacterial sepsis of newborn), P36.9 (bacterial sepsis of newborn unspecified), P23.0 (congenital pneumonia due to viral agent), P23.1 (due to Chlamydia), P23.2 (due to staphylococcus), P23.3 (due to group B strep), P23.4 (due to E. coli), P23.5 (due to Pseudomonas), P23.6 (due to other bacterial agents), P23.8 (due to other organisms), P23.9 (congenital pneumonia unspecified)

A. ADMISSION CRITERIA — Severity of Illness (SI) / Intensity of Service (IS)

SEVERITY OF ILLNESS (SI) — Must meet ≥ 1 :

- Maternal risk factors for EOS: GBS positive/unknown with inadequate IAP, PROM >18h, chorioamnionitis, maternal fever >38°C
- Clinical signs: temperature instability (<36.5°C or >37.5°C), tachycardia >160, bradycardia <100, tachypnea >60, apnea, respiratory

distress, lethargy, poor feeding, hypotension, glucose instability

- Kaiser Neonatal EOS Calculator risk ≥ 1 per 1000 live births
- Labs: WBC <5000 or >25000, I:T ratio >0.2, CRP >10 mg/L, procalcitonin >2 ng/mL, thrombocytopenia <100K
- Positive blood culture (definitive diagnosis)
- Late-onset (>72h): clinical deterioration in previously stable NICU infant with central line, TPN, or prolonged stay

INTENSITY OF SERVICE (IS) — Must meet ≥ 1 :

- Blood culture obtained BEFORE antibiotics (minimum 1mL in pediatric bottle)
- IV antibiotics within 1 hour: EOS = ampicillin + gentamicin; LOS = vancomycin + gentamicin or cefepime
- LP if: positive blood culture, clinical meningitis, AMS, seizure, WBC <5K
- Continuous cardiorespiratory monitoring
- IV fluid resuscitation for hemodynamic instability (10-20 mL/kg NS bolus)
- Vasopressors for refractory shock (dopamine first-line neonatal, then epinephrine)

B. OBSERVATION vs INPATIENT DECISION MATRIX

ALWAYS INPATIENT for suspected or confirmed neonatal sepsis

DOES NOT MEET CRITERIA:

- Well-appearing term infant with maternal GBS + adequate IAP (≥ 4 h before delivery) and no clinical signs → well-baby nursery

observation per AAP

- Kaiser EOS Calculator risk <0.5 per 1000 with well-appearing infant → routine newborn care
- Continued antibiotics beyond 48h when cultures negative at 36-48h AND infant clinically well → STOP antibiotics, plan discharge

(AAP 2018)

- NICU admission for positive maternal GBS alone without infant clinical signs

C. CONTINUED STAY / CONCURRENT REVIEW

DAILY review. Cultures at 36-48h: if negative AND well → STOP antibiotics (AAP 2018). If positive: identify organism, narrow, LP if not done. Duration: bacteremia 7-10d, meningitis 14d (GBS) or 21d (gram-negative).

CONTINUED STAY IF: Positive culture on IV therapy, meningitis, hemodynamic instability, respiratory decompensation

D. DISCHARGE CRITERIA — Safe Transition to Next Level of Care

- Cultures negative at 36-48h AND clinically well → stop antibiotics, discharge if feeding well
- If culture positive: completed antibiotic course, repeat culture negative, clinically well
- Afebrile, hemodynamically stable, no apnea/bradycardia ≥ 48 h post-antibiotics
- Follow-up within 48-72h

E. EVIDENCE SOURCES

1. AAP: Management of Neonates ≥ 35 Weeks with Suspected EOS. Puopolo KM, et al. Pediatrics. 2018;142:e20182894.
2. Kaiser EOS Calculator. Kuzniewicz MW, et al. JAMA Pediatrics. 2017;171:354-360.
3. AAP: GBS Prophylaxis. Pediatrics. 2019;144:e20191881.

F. MS-DRG CROSSWALK & REVENUE CODES

MS-DRG: DRG 791 (Prematurity w Major Problems RW ~3.24), DRG 793 (Full Term w Major Problems RW ~1.58), DRG 794 (Other Significant Problems RW ~0.95), DRG 795 (Normal Newborn RW ~0.18 — if R/O sepsis negative/well)

REVENUE CODES: 0173-0174 (NICU), 0250 (Pharmacy), 0300 (Lab — blood culture, CBC, CRP, CSF), 0636 (Drugs)

G. GOAL LENGTH OF STAY (UNCOMPLICATED CASE)

Goal LOS: 4-7 days Source: Curative Appendix A; SCCM Surviving Sepsis Campaign 2021

H. LEVEL OF CARE (LOC) GRID — PUBLIC-SOURCE STANDARDIZED CRITERIA

- ICU (NICU Level III/IV): Mechanical ventilation, HFOV/HFJV/iNO, vasoactives, therapeutic hypothermia, ECMO, post-cardiac surgery, surgical NEC, GA <32 weeks or BW <1500 g per AAP Level III; complex congenital surgery requires Level IV.
- Stepdown (NICU Level II): CPAP/HFNC, gavage feeds advancing, weight gaining, on antibiotics, monitoring for apnea of prematurity per AAP Level II.
- Med-Surg (Newborn Nursery / Continuing Care): Term/late preterm with stable VS, oral feeds, room air, weight gaining, awaiting discharge teaching.
- Observation: Generally not applicable; well-baby observation falls under newborn nursery billing.
- Post-Acute (Home, with or without HHA / Level II step-down): May transition to Level II hospital closer to home prior to discharge.
- Home (with/without HHA): Per AAP discharge criteria: stable in open crib, feeding orally with weight gain, room air or stable home O₂, parental competency, car-seat test passed, follow-up pediatrics/neonatology in 1 week; HHA for home apnea monitor, oxygen, NG feeds.

LOC Grid Sources: AAP Levels of Neonatal Care (2023, Pediatrics 152:e2023061851); AAP Hospital Discharge of the High-Risk Neonate (2008, reaffirmed 2022); CMS MS-DRG 789-795.

I. EXTENDED STAY CRITERIA & GUIDANCE

When Goal LOS is exceeded, continued inpatient stay requires documentation of ONE OR MORE of the following medical-necessity triggers. Document the specific trigger, the clinical evidence supporting it, and the targeted intervention plan.

- Continued respiratory support (CPAP, HFNC, supplemental O₂) without weaning to room air
- Apnea of prematurity not yet resolved (event-free interval not yet met per AAP)
- Inability to achieve full oral feeds and weight gain in open crib
- Newly identified comorbidity (e.g., ROP requiring laser, IVH progression, BPD)
- Failure of parent/caregiver education and competency demonstration

Extended Stay Sources: Sources: AAP Levels of Neonatal Care (2023); AAP Hospital Discharge of the High-Risk Neonate (2008, reaffirmed 2022).

HYPOXIC-ISCHEMIC ENCEPHALOPATHY (HIE) / THERAPEUTIC HYPOTHERMIA

ICD-10-CM: P91.60 (HIE unspecified), P91.61 (HIE mild), P91.62 (HIE moderate), P91.63 (HIE severe), P91.0 (neonatal cerebral ischemia), P91.4 (neonatal cerebral depression), P91.5 (neonatal coma), P91.811 (neonatal encephalopathy in diseases classified elsewhere), P91.819 (neonatal encephalopathy unspecified), P84 (other problems with newborn — acidemia NOS), P21.0 (severe birth asphyxia), P21.1 (mild/moderate birth asphyxia), P21.9 (birth asphyxia unspecified)

A. ADMISSION CRITERIA — Severity of Illness (SI) / Intensity of Service (IS)

APPROVAL REQUIRES ALL THREE CRITERIA (A + B + C):

A. EVIDENCE OF PERINATAL ASPHYXIA — Must meet ≥1:

- Sentinel event (cord prolapse, uterine rupture, abruption, shoulder dystocia, maternal arrest)
- Cord gas or first postnatal gas within 60 min: pH <7.00 or base deficit ≥16 mEq/L
- If pH 7.01-7.15 or BD 10-15.9: proceed to criteria B and C

B. CLINICAL EVIDENCE — Must meet ≥1:

- Apgar score ≤5 at 5 minutes AND/OR ≤5 at 10 minutes
- Continued need for resuscitation at 10 minutes of life (positive pressure ventilation)

C. NEUROLOGICAL EXAM (Sarnat Staging) — Must meet Stage II or III:

- Stage II (moderate): lethargy, hypotonia, weak suck/Moro, constricted pupils, possible seizures
- Stage III (severe): stupor/coma, flaccid, absent reflexes, dilated/fixed pupils, seizures
- aEEG: moderately or severely abnormal background

INTENSITY OF SERVICE (IS) — Must meet ≥1:

- Therapeutic hypothermia: target core temp 33.5°C x 72 hours — MUST initiate within 6 hours of birth
- NICU Level III-IV with hypothermia protocol (servo-controlled cooling blanket)
- Continuous aEEG monitoring throughout cooling + rewarming
- Mechanical ventilation
- Seizure management (phenobarbital 20mg/kg loading first-line)
- Serial labs q6-12h: ABG, lactate, electrolytes, LFTs, Cr, coagulation
- MRI brain at day 5-7 post-rewarming for prognostication

B. OBSERVATION vs INPATIENT DECISION MATRIX

ALWAYS NICU Level III-IV — Transfer to cooling center if born at facility without capability

DOES NOT MEET CRITERIA FOR THERAPEUTIC HYPOTHERMIA:

- Gestational age <35 weeks (cooling trials excluded <36 weeks)
- Birth weight <1800g
- Age >6 hours at identification (cooling window closed)
- Sarnat Stage I (mild): alert, normal/increased tone, strong reflexes → monitor but cooling NOT indicated (NICHD excluded Stage I)
- Major congenital anomaly incompatible with survival

DOES NOT MEET CRITERIA FOR CONTINUED NICU:

- Mild HIE (Stage I) resolving within 24-48h with normal feeding and exam → may transition to well-baby nursery

C. CONTINUED STAY / CONCURRENT REVIEW

HOURS 0-6: Initiate cooling within 6h. HOURS 0-72 (Cooling): Core temp 33.5±0.5°C, continuous aEEG, seizure monitoring, minimal handling, NPO, IV fluids 50-60 mL/kg/day. HOURS 72-84 (Rewarming): 0.5°C/hour over 6-12 hours. POST-REWARMING DAY 4-7: MRI brain, resume feeds, neurology planning.

CONTINUED STAY IF: Ongoing seizures, ventilator-dependent, unable to feed, multiorgan injury, abnormal MRI requiring family counseling

D. DISCHARGE CRITERIA — Safe Transition to Next Level of Care

- Completed 72h cooling + rewarming protocol
- Seizure-free ≥48h (on or off anticonvulsants)
- MRI brain completed and results discussed with family
- Feeding established (oral or tube feeding with trained caregivers)
- Off respiratory support or on stable home O2
- Renal function stable, LFTs improving
- Early intervention referral submitted
- Neurology follow-up within 4 weeks

E. EVIDENCE SOURCES

1. NICHD Whole-Body Cooling Trial. Shankaran S, et al. NEJM. 2005;353:1574-1584.
2. TOBY Trial. Azzopardi DV, et al. NEJM. 2009;361:1349-1358.
3. AAP: Hypothermia and Neonatal Encephalopathy. Pediatrics. 2014;133:1146-1150.
4. Sarnat Staging. Sarnat HB, Sarnat MS. Arch Neurol. 1976;33:696-705.

F. MS-DRG CROSSWALK & REVENUE CODES

MS-DRG: DRG 793 (Full Term w Major Problems RW ~1.58), DRG 790-791 if premature

REVENUE CODES: 0173-0174 (NICU III-IV), 0920 (EEG/aEEG continuous 72h+), 0610 (MRI brain), 0410 (Respiratory/ventilator), 0250 (Pharmacy — phenobarbital, sedation), 0300 (Lab — serial ABG, lactate, CMP, LFTs, coags q6-12h), 0636 (Drugs)

G. GOAL LENGTH OF STAY (UNCOMPLICATED CASE)

Goal LOS: 10-21 days Source: AAP HIE/Hypothermia (Higgins 2011; updated 2023)

H. LEVEL OF CARE (LOC) GRID — PUBLIC-SOURCE STANDARDIZED CRITERIA

- ICU (NICU Level III/IV): Mechanical ventilation, HFOV/HFJV/iNO, vasoactives, therapeutic hypothermia, ECMO, post-cardiac surgery, surgical NEC, GA <32 weeks or BW <1500 g per AAP Level III; complex congenital surgery requires Level IV.
- Stepdown (NICU Level II): CPAP/HFNC, gavage feeds advancing, weight gaining, on antibiotics, monitoring for apnea of prematurity per AAP Level II.
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- Observation: Generally not applicable; well-baby observation falls under newborn nursery billing.

- Post-Acute (Home, with or without HHA / Level II step-down): May transition to Level II hospital closer to home prior to discharge.
- Home (with/without HHA): Per AAP discharge criteria: stable in open crib, feeding orally with weight gain, room air or stable home O₂, parental competency, car-seat test passed, follow-up pediatrics/neonatology in 1 week; HHA for home apnea monitor, oxygen, NG feeds.

LOC Grid Sources: AAP Levels of Neonatal Care (2023, Pediatrics 152:e2023061851); AAP Hospital Discharge of the High-Risk Neonate (2008, reaffirmed 2022); CMS MS-DRG 789-795.

I. EXTENDED STAY CRITERIA & GUIDANCE

When Goal LOS is exceeded, continued inpatient stay requires documentation of ONE OR MORE of the following medical-necessity triggers. Document the specific trigger, the clinical evidence supporting it, and the targeted intervention plan.

- Continued respiratory support (CPAP, HFNC, supplemental O₂) without weaning to room air
- Apnea of prematurity not yet resolved (event-free interval not yet met per AAP)
- Inability to achieve full oral feeds and weight gain in open crib
- Newly identified comorbidity (e.g., ROP requiring laser, IVH progression, BPD)
- Failure of parent/caregiver education and competency demonstration

Extended Stay Sources: Sources: AAP Levels of Neonatal Care (2023); AAP Hospital Discharge of the High-Risk Neonate (2008, reaffirmed 2022).

NECROTIZING ENTEROCOLITIS (NEC)

ICD-10-CM: P77.1 (NEC Stage 1), P77.2 (NEC Stage 2 — with pneumatosis), P77.3 (NEC Stage 3 — with perforation), P77.9 (NEC unspecified), K55.011 (focal acute ischemia small intestine without perforation), K55.012 (diffuse acute ischemia small intestine), K55.031 (focal acute ischemia large intestine), K55.032 (diffuse acute ischemia large intestine), K55.051 (acute ischemia intestine with perforation), K55.061 (acute ischemia intestine with gangrene)

A. ADMISSION CRITERIA — Severity of Illness (SI) / Intensity of Service (IS)

SEVERITY OF ILLNESS (SI) — Classify by Modified Bell Stage; must meet criteria for ≥Stage I:

STAGE I (Suspected NEC) — Must meet ≥2:

- Temperature instability
- Apnea/bradycardia episodes (new or increased frequency)
- Feeding intolerance (increased gastric residuals >50% of feed volume, bilious emesis)
- Mild abdominal distension
- Occult blood in stool (guaiac positive)

STAGE II (Definite NEC) — Stage I findings PLUS ≥1:

- Absent bowel sounds
- Marked abdominal distension/tenderness
- Abdominal wall erythema or edema
- XR: pneumatosis intestinalis (pathognomonic) ± portal venous gas
- Thrombocytopenia (<100K or rapidly declining)
- Metabolic acidosis (pH <7.30, base deficit >8)

STAGE III (Advanced NEC) — Stage II findings PLUS ≥1:

- Hemodynamic instability (hypotension requiring vasopressors, poor perfusion)
- Respiratory failure requiring escalation
- DIC (elevated PT/INR, low fibrinogen, elevated D-dimer)
- Peritonitis (generalized tenderness, abdominal wall crepitus)
- XR: pneumoperitoneum (FREE AIR = perforation = surgical emergency)

INTENSITY OF SERVICE (IS) — Must meet ≥1:

- NPO with complete bowel rest (7 days Stage II, 10-14 days Stage III)
- NG/OG tube to low intermittent suction
- IV antibiotics: ampicillin + gentamicin + metronidazole (7-14 days per stage)
- TPN via central line for nutrition during bowel rest
- Serial abdominal XR q6-12h (AP + left lateral decubitus) for Stage II-III
- Surgical consultation for ALL Stage II and III
- Emergent surgery for: pneumoperitoneum, clinical deterioration, fixed dilated loop, abdominal wall crepitus

B. OBSERVATION vs INPATIENT DECISION MATRIX

ALWAYS NICU — All NEC (even Stage I/suspected) requires NICU management

DOES NOT MEET CRITERIA FOR NEC DIAGNOSIS/TREATMENT:

- Isolated feeding intolerance without distension, without XR abnormality, without systemic signs → benign feeding intolerance; adjust

feeds, no antibiotics

- Blood-streaked stool with anal fissure and no abdominal distension → not NEC
- Continued NPO/antibiotics beyond protocol duration when CRP normalized, abdomen benign, XR clear → resume feeds
- Continued NICU solely for slow feed advancement when otherwise stable → can transition to intermediate care

C. CONTINUED STAY / CONCURRENT REVIEW

q12h (Stage II-III); q24h (Stage I). Stage I: bowel rest 48-72h, serial exams/XR; if improving resume trophic feeds; if worsening escalate to Stage II. Stage II: bowel rest 7d, KUB q6-12h, daily labs, surgical standby. Stage III: emergent surgery if free air.

CONTINUED STAY IF: NPO/bowel rest, TPN-dependent, post-surgical, thrombocytopenia, hemodynamic instability, feeding intolerance during re-feeding

D. DISCHARGE CRITERIA — Safe Transition to Next Level of Care

- Tolerating full enteral feeds with sustained weight gain ($\geq 20\text{g/day}$)
- Off TPN, central line removed
- Completed antibiotic course
- Stable abdominal exam (soft, non-distended, active bowel sounds)
- Labs normalizing (CRP < 10 , platelets $> 100\text{K}$, WBC normal)
- If ostomy: parents trained, supplies arranged, surgical follow-up for reversal 6-8 weeks
- Parents counseled on NEC stricture signs (10-20% late complication)

E. EVIDENCE SOURCES

1. Modified Bell Staging. Bell MJ, et al. Ann Surg. 1978;187:1-7.
2. Neu J, Walker WA. NEC. NEJM. 2011;364:255-264.
3. NET Trial (Drainage vs Laparotomy). Rees CM, et al. NEJM. 2008;358:2001-2013.
4. Vermont Oxford Network NEC Prevention Bundle. VON. 2024.

F. MS-DRG CROSSWALK & REVENUE CODES

MS-DRG: DRG 790 (Extreme Immaturity/RDS if preterm with NEC RW ~4.54), DRG 791 (Prematurity w Major Problems RW ~3.24), DRG 793 (Full Term w Major Problems RW ~1.58). If surgical: ICD-10-PCS 0DT60ZZ (resection small intestine), 0DT80ZZ (resection large intestine)

REVENUE CODES: 0173-0174 (NICU), 0360 (OR if laparotomy/drainage), 0250 (Pharmacy — antibiotics, TPN), 0270 (Supplies — NG tube, ostomy), 0300 (Lab — CBC, CMP, blood gas, CRP q8-12h), 0320 (Radiology — serial KUB), 0636 (Drugs)

G. GOAL LENGTH OF STAY (UNCOMPLICATED CASE)

Goal LOS: 21-60 days Source: AAP NEC Clinical Report (2022)

H. LEVEL OF CARE (LOC) GRID — PUBLIC-SOURCE STANDARDIZED CRITERIA

- ICU (NICU Level III/IV): Mechanical ventilation, HFOV/HFJV/iNO, vasoactives, therapeutic hypothermia, ECMO, post-cardiac surgery, surgical NEC, GA < 32 weeks or BW < 1500 g per AAP Level III; complex congenital surgery requires Level IV.
- Stepdown (NICU Level II): CPAP/HFNC, gavage feeds advancing, weight gaining, on antibiotics, monitoring for apnea of prematurity per AAP Level II.
- Med-Surg (Newborn Nursery / Continuing Care): Term/late preterm with stable VS, oral feeds, room air, weight gaining, awaiting discharge teaching.
- Observation: Generally not applicable; well-baby observation falls under newborn nursery billing.
- Post-Acute (Home, with or without HHA / Level II step-down): May transition to Level II hospital closer to home prior to discharge.
- Home (with/without HHA): Per AAP discharge criteria: stable in open crib, feeding orally with weight gain, room air or stable home O_2 , parental competency, car-seat test passed, follow-up pediatrics/neonatology in 1 week; HHA for home apnea monitor, oxygen, NG feeds.

LOC Grid Sources: AAP Levels of Neonatal Care (2023, Pediatrics 152:e2023061851); AAP Hospital Discharge of the High-Risk Neonate (2008, reaffirmed 2022); CMS MS-DRG 789-795.

I. EXTENDED STAY CRITERIA & GUIDANCE

When Goal LOS is exceeded, continued inpatient stay requires documentation of ONE OR MORE of the following medical-necessity triggers. Document the specific trigger, the clinical evidence supporting it, and the targeted intervention plan.

- Continued respiratory support (CPAP, HFNC, supplemental O_2) without weaning to room air

- Apnea of prematurity not yet resolved (event-free interval not yet met per AAP)
- Inability to achieve full oral feeds and weight gain in open crib
- Newly identified comorbidity (e.g., ROP requiring laser, IVH progression, BPD)
- Failure of parent/caregiver education and competency demonstration

Extended Stay Sources: Sources: AAP Levels of Neonatal Care (2023); AAP Hospital Discharge of the High-Risk Neonate (2008, reaffirmed 2022).

PERSISTENT PULMONARY HYPERTENSION OF THE NEWBORN (PPHN)

ICD-10-CM: P29.30 (PPHN unspecified), P29.38 (other persistent fetal circulation)

A. ADMISSION CRITERIA — Severity of Illness (SI) / Intensity of Service (IS)

SEVERITY OF ILLNESS (SI) — Must meet ≥ 2 :

- Near-term/term infant (≥ 34 weeks) with severe hypoxemia (SpO₂ <90% on FiO₂ 1.0)
- Pre-post ductal SpO₂ gradient >10%
- Echo: right-to-left shunting at PDA/foramen ovale, elevated RVSP >2/3 systemic
- Labile oxygenation (SpO₂ fluctuates >10% with minimal stimulation)
- Oxygenation Index (OI) >15

INTENSITY OF SERVICE (IS) — Must meet ≥ 1 :

- Inhaled nitric oxide (iNO) 20 ppm
- HFOV or conventional ventilation with high MAP
- ECMO evaluation if OI persistently >40 despite iNO + HFOV
- Continuous pre- and post-ductal SpO₂ monitoring

B. OBSERVATION vs INPATIENT DECISION MATRIX

ALWAYS INPATIENT — NICU or special care nursery level required

DOES NOT MEET CRITERIA:

- Continued NICU when all discharge criteria met and infant physiologically ready for transition
- Continued stay solely for convenience, non-medical placement, or social reasons when medically ready
- Treatment/diagnostics that can be safely completed on outpatient basis

C. CONTINUED STAY / CONCURRENT REVIEW

DAILY review by neonatologist/attending. Continued stay justified if: active treatment ongoing, has not met discharge criteria, requires monitoring/services not available at lower level of care.

NOT JUSTIFIED: Awaiting elective outpatient testing, awaiting non-medical placement, observation beyond standard monitoring period when clinically reassuring

D. DISCHARGE CRITERIA — Safe Transition to Next Level of Care

- Condition-specific milestones met (see clinical guidelines in Evidence Sources)
- Physiologically stable: temperature, respiratory, cardiovascular, feeding
- Appropriate weight gain trajectory (≥ 20 -30 g/day)
- Parents/caregivers trained on condition-specific care
- Follow-up arranged with appropriate specialists
- Equipment/supplies arranged if needed

E. EVIDENCE SOURCES

See condition-specific AAP Clinical Reports and specialty society guidelines. AAP: Hospital Discharge of High-Risk Neonate. Pediatrics. 2008;122:1119-1126. Reaffirmed 2022. Vermont Oxford Network. VON. 2024.

F. MS-DRG CROSSWALK & REVENUE CODES

DRG 790/793 Rev 0173-0174, 0410 (Respiratory, iNO delivery), 0250 (Pharmacy — iNO ~\$100/hr), 0636 (Drugs — iNO ~\$2400/day)

G. GOAL LENGTH OF STAY (UNCOMPLICATED CASE)

Goal LOS: 10-21 days Source: AAP PPHN Clinical Report (2023)

H. LEVEL OF CARE (LOC) GRID — PUBLIC-SOURCE STANDARDIZED CRITERIA

- ICU (NICU Level III/IV): Mechanical ventilation, HFOV/HFJV/iNO, vasoactives, therapeutic hypothermia, ECMO, post-cardiac surgery, surgical NEC, GA <32 weeks or BW <1500 g per AAP Level III; complex congenital surgery requires Level IV.

- Stepdown (NICU Level II): CPAP/HFNC, gavage feeds advancing, weight gaining, on antibiotics, monitoring for apnea of prematurity per AAP Level II.
- Med-Surg (Newborn Nursery / Continuing Care): Term/late preterm with stable VS, oral feeds, room air, weight gaining, awaiting discharge teaching.
- Observation: Generally not applicable; well-baby observation falls under newborn nursery billing.
- Post-Acute (Home, with or without HHA / Level II step-down): May transition to Level II hospital closer to home prior to discharge.
- Home (with/without HHA): Per AAP discharge criteria: stable in open crib, feeding orally with weight gain, room air or stable home O₂, parental competency, car-seat test passed, follow-up pediatrics/neonatology in 1 week; HHA for home apnea monitor, oxygen, NG feeds.

LOC Grid Sources: AAP Levels of Neonatal Care (2023, Pediatrics 152:e2023061851); AAP Hospital Discharge of the High-Risk Neonate (2008, reaffirmed 2022); CMS MS-DRG 789-795.

I. EXTENDED STAY CRITERIA & GUIDANCE

When Goal LOS is exceeded, continued inpatient stay requires documentation of ONE OR MORE of the following medical-necessity triggers. Document the specific trigger, the clinical evidence supporting it, and the targeted intervention plan.

- Continued respiratory support (CPAP, HFNC, supplemental O₂) without weaning to room air
- Apnea of prematurity not yet resolved (event-free interval not yet met per AAP)
- Inability to achieve full oral feeds and weight gain in open crib
- Newly identified comorbidity (e.g., ROP requiring laser, IVH progression, BPD)
- Failure of parent/caregiver education and competency demonstration

Extended Stay Sources: Sources: AAP Levels of Neonatal Care (2023); AAP Hospital Discharge of the High-Risk Neonate (2008, reaffirmed 2022).

NEONATAL ABSTINENCE SYNDROME (NAS) / NOWS

ICD-10-CM: P96.1 (neonatal withdrawal from maternal drugs of addiction), P04.14 (newborn affected by maternal opiates), P04.11 (cocaine), P04.13 (phenothiazines), P04.15 (antidepressants), P04.16 (amphetamines), P04.17 (sedative-hypnotics), P04.1A (anxiolytics), P04.40 (unspecified drugs of addiction), P04.42 (cannabis), P04.49 (other drugs of addiction)

A. ADMISSION CRITERIA — Severity of Illness (SI) / Intensity of Service (IS)

SEVERITY OF ILLNESS (SI) — Must meet ≥ 1 :

- Modified Finnegan Score ≥ 8 on 3 consecutive scores OR ≥ 12 on 2 consecutive scores
- Eat Sleep Console (ESC) assessment: unable to eat ≥ 1 oz, unable to sleep ≥ 1 hour, unable to be consoled within 10 min
- Seizures (rare but severe)

INTENSITY OF SERVICE (IS) — Must meet ≥ 1 :

- Pharmacologic treatment: morphine sulfate 0.04-0.08mg/kg PO q3-4h OR methadone 0.05-0.1mg/kg PO q6h
- q3-4h scoring (Finnegan or ESC)
- Non-pharmacologic first-line: rooming-in, low-stimulation, skin-to-skin, swaddling, breastfeeding if eligible

B. OBSERVATION vs INPATIENT DECISION MATRIX

ALWAYS INPATIENT — NICU or special care nursery level required

DOES NOT MEET CRITERIA:

- Continued NICU when all discharge criteria met and infant physiologically ready for transition
- Continued stay solely for convenience, non-medical placement, or social reasons when medically ready
- Treatment/diagnostics that can be safely completed on outpatient basis

C. CONTINUED STAY / CONCURRENT REVIEW

DAILY review by neonatologist/attending. Continued stay justified if: active treatment ongoing, has not met discharge criteria, requires monitoring/services not available at lower level of care.

NOT JUSTIFIED: Awaiting elective outpatient testing, awaiting non-medical placement, observation beyond standard monitoring period when clinically reassuring

D. DISCHARGE CRITERIA — Safe Transition to Next Level of Care

- Condition-specific milestones met (see clinical guidelines in Evidence Sources)
- Physiologically stable: temperature, respiratory, cardiovascular, feeding
- Appropriate weight gain trajectory (≥ 20 -30 g/day)
- Parents/caregivers trained on condition-specific care

- Follow-up arranged with appropriate specialists
- Equipment/supplies arranged if needed

E. EVIDENCE SOURCES

See condition-specific AAP Clinical Reports and specialty society guidelines. AAP: Hospital Discharge of High-Risk Neonate. Pediatrics. 2008;122:1119-1126. Reaffirmed 2022. Vermont Oxford Network. VON. 2024.

F. MS-DRG CROSSWALK & REVENUE CODES

DRG 793 (Full Term w Major Problems RW ~1.58), DRG 794 (Other Significant RW ~0.95), DRG 795 (Normal Newborn RW ~0.18) Rev 0172-0173, 0250 (morphine/methadone), 0300 (Lab)

G. GOAL LENGTH OF STAY (UNCOMPLICATED CASE)

Goal LOS: 7-21 days Source: AAP NAS/NOWS Clinical Report (Patrick 2020)

H. LEVEL OF CARE (LOC) GRID — PUBLIC-SOURCE STANDARDIZED CRITERIA

- ICU (NICU Level III/IV): Mechanical ventilation, HFOV/HFJV/iNO, vasoactives, therapeutic hypothermia, ECMO, post-cardiac surgery, surgical NEC, GA <32 weeks or BW <1500 g per AAP Level III; complex congenital surgery requires Level IV.
- Stepdown (NICU Level II): CPAP/HFNC, gavage feeds advancing, weight gaining, on antibiotics, monitoring for apnea of prematurity per AAP Level II.
- Med-Surg (Newborn Nursery / Continuing Care): Term/late preterm with stable VS, oral feeds, room air, weight gaining, awaiting discharge teaching.
- Observation: Generally not applicable; well-baby observation falls under newborn nursery billing.
- Post-Acute (Home, with or without HHA / Level II step-down): May transition to Level II hospital closer to home prior to discharge.
- Home (with/without HHA): Per AAP discharge criteria: stable in open crib, feeding orally with weight gain, room air or stable home O₂, parental competency, car-seat test passed, follow-up pediatrics/neonatology in 1 week; HHA for home apnea monitor, oxygen, NG feeds.

LOC Grid Sources: AAP Levels of Neonatal Care (2023, Pediatrics 152:e2023061851); AAP Hospital Discharge of the High-Risk Neonate (2008, reaffirmed 2022); CMS MS-DRG 789-795.

I. EXTENDED STAY CRITERIA & GUIDANCE

When Goal LOS is exceeded, continued inpatient stay requires documentation of ONE OR MORE of the following medical-necessity triggers. Document the specific trigger, the clinical evidence supporting it, and the targeted intervention plan.

- Continued respiratory support (CPAP, HFNC, supplemental O₂) without weaning to room air
- Apnea of prematurity not yet resolved (event-free interval not yet met per AAP)
- Inability to achieve full oral feeds and weight gain in open crib
- Newly identified comorbidity (e.g., ROP requiring laser, IVH progression, BPD)
- Failure of parent/caregiver education and competency demonstration

Extended Stay Sources: Sources: AAP Levels of Neonatal Care (2023); AAP Hospital Discharge of the High-Risk Neonate (2008, reaffirmed 2022).

CONGENITAL HEART DISEASE REQUIRING NEONATAL INTERVENTION

ICD-10-CM: Q20.0 (common arterial trunk), Q20.1 (DORV), Q20.3 (TGA/transposition), Q21.0 (VSD), Q21.1 (ASD), Q21.2 (AV septal defect), Q21.3 (Tetralogy of Fallot), Q22.0 (pulmonary atresia), Q22.1 (congenital pulmonary stenosis), Q22.5 (Ebstein anomaly), Q23.0 (congenital aortic stenosis), Q23.4 (hypoplastic left heart syndrome), Q25.0 (PDA), Q25.1 (coarctation of aorta), Q25.21 (interrupted aortic arch)

A. ADMISSION CRITERIA — Severity of Illness (SI) / Intensity of Service (IS)

SEVERITY OF ILLNESS (SI) — Must meet ≥1:

- Cyanotic heart disease with SpO₂ <85% on room air or requiring prostaglandin E1 (PGE1) to maintain ductal patency
- Ductal-dependent lesion (HLHS, critical coarctation, critical PS, TGA, pulmonary atresia)
- Heart failure in neonate (tachypnea, hepatomegaly, failure to thrive)
- Hemodynamically significant lesion requiring surgical or catheter intervention in neonatal period

INTENSITY OF SERVICE (IS) — Must meet ≥1:

- PGE1 infusion (0.01-0.1 mcg/kg/min) to maintain ductal patency — NICU or CICU
- Cardiac surgery (Norwood, arterial switch, Blalock-Taussig shunt, coarctation repair)
- Cardiac catheterization (balloon atrial septostomy, balloon valvuloplasty, ductal stenting)
- Continuous cardiorespiratory monitoring with pre-/post-ductal SpO₂

B. OBSERVATION vs INPATIENT DECISION MATRIX

ALWAYS INPATIENT — NICU or special care nursery level required

DOES NOT MEET CRITERIA:

- Continued NICU when all discharge criteria met and infant physiologically ready for transition
- Continued stay solely for convenience, non-medical placement, or social reasons when medically ready
- Treatment/diagnostics that can be safely completed on outpatient basis

C. CONTINUED STAY / CONCURRENT REVIEW

DAILY review by neonatologist/attending. Continued stay justified if: active treatment ongoing, has not met discharge criteria, requires monitoring/services not available at lower level of care.

NOT JUSTIFIED: Awaiting elective outpatient testing, awaiting non-medical placement, observation beyond standard monitoring period when clinically reassuring

D. DISCHARGE CRITERIA — Safe Transition to Next Level of Care

- Condition-specific milestones met (see clinical guidelines in Evidence Sources)
- Physiologically stable: temperature, respiratory, cardiovascular, feeding
- Appropriate weight gain trajectory (≥ 20 -30 g/day)
- Parents/caregivers trained on condition-specific care
- Follow-up arranged with appropriate specialists
- Equipment/supplies arranged if needed

E. EVIDENCE SOURCES

See condition-specific AAP Clinical Reports and specialty society guidelines. AAP: Hospital Discharge of High-Risk Neonate. Pediatrics. 2008;122:1119-1126. Reaffirmed 2022. Vermont Oxford Network. VON. 2024.

F. MS-DRG CROSSWALK & REVENUE CODES

DRG 820 (Congenital Cardiac Surgical Neonate RW ~13.92), DRG 821 (w CC RW ~7.58), DRG 822 (w/o CC/MCC RW ~4.42) CPT 33924 (Norwood), 33770-33783 (arterial switch, shunts) Rev 0173-0174, 0360 (OR), 0481 (Cath Lab), 0200 (Cardiac ICU)

G. GOAL LENGTH OF STAY (UNCOMPLICATED CASE)

Goal LOS: 14-30 days Source: AHA/AAP Pediatric Cardiology Guidelines; STS Congenital Database

H. LEVEL OF CARE (LOC) GRID — PUBLIC-SOURCE STANDARDIZED CRITERIA

- ICU (NICU Level III/IV): Mechanical ventilation, HFOV/HFJV/iNO, vasoactives, therapeutic hypothermia, ECMO, post-cardiac surgery, surgical NEC, GA <32 weeks or BW <1500 g per AAP Level III; complex congenital surgery requires Level IV.
- Stepdown (NICU Level II): CPAP/HFNC, gavage feeds advancing, weight gaining, on antibiotics, monitoring for apnea of prematurity per AAP Level II.
- Med-Surg (Newborn Nursery / Continuing Care): Term/late preterm with stable VS, oral feeds, room air, weight gaining, awaiting discharge teaching.
- Observation: Generally not applicable; well-baby observation falls under newborn nursery billing.
- Post-Acute (Home, with or without HHA / Level II step-down): May transition to Level II hospital closer to home prior to discharge.
- Home (with/without HHA): Per AAP discharge criteria: stable in open crib, feeding orally with weight gain, room air or stable home O₂, parental competency, car-seat test passed, follow-up pediatrics/neonatology in 1 week; HHA for home apnea monitor, oxygen, NG feeds.

LOC Grid Sources: AAP Levels of Neonatal Care (2023, Pediatrics 152:e2023061851); AAP Hospital Discharge of the High-Risk Neonate (2008, reaffirmed 2022); CMS MS-DRG 789-795.

I. EXTENDED STAY CRITERIA & GUIDANCE

When Goal LOS is exceeded, continued inpatient stay requires documentation of ONE OR MORE of the following medical-necessity triggers. Document the specific trigger, the clinical evidence supporting it, and the targeted intervention plan.

- Continued respiratory support (CPAP, HFNC, supplemental O₂) without weaning to room air
- Apnea of prematurity not yet resolved (event-free interval not yet met per AAP)
- Inability to achieve full oral feeds and weight gain in open crib
- Newly identified comorbidity (e.g., ROP requiring laser, IVH progression, BPD)
- Failure of parent/caregiver education and competency demonstration

Extended Stay Sources: Sources: AAP Levels of Neonatal Care (2023); AAP Hospital Discharge of the High-Risk Neonate (2008, reaffirmed 2022).

MECONIUM ASPIRATION SYNDROME (MAS)

ICD-10-CM: P24.00 (meconium aspiration without respiratory symptoms), P24.01 (meconium aspiration with respiratory symptoms), P24.10 (neonatal aspiration of blood without symptoms), P24.11 (with symptoms), P24.20 (aspiration of amniotic fluid without symptoms), P24.21 (with symptoms), P24.30 (aspiration of milk without symptoms), P24.31 (with symptoms), P24.9 (neonatal aspiration unspecified)

A. ADMISSION CRITERIA — Severity of Illness (SI) / Intensity of Service (IS)

SEVERITY OF ILLNESS (SI) — Must meet ≥ 2 :

- Meconium-stained amniotic fluid at delivery with respiratory distress in first 24 hours
- CXR: patchy/asymmetric opacities, hyperinflation, air trapping
- FiO₂ >0.40 to maintain SpO₂ >92%
- OI >15 (if concurrent PPHN — occurs in 30% of severe MAS)
- Persistent respiratory distress >24 hours

INTENSITY OF SERVICE (IS) — Must meet ≥ 1 :

- Mechanical ventilation (avoid high PEEP — air trapping risk) or HFOV
- Suctioning of airways (ETT suction if thick meconium below cords per NRP 2020)
- Surfactant therapy (MAS inactivates surfactant; lavage or bolus per institutional protocol)
- iNO if concurrent PPHN (OI >15-25)
- ECMO if refractory (OI >40)

B. OBSERVATION vs INPATIENT DECISION MATRIX

ALWAYS INPATIENT — NICU or special care nursery level required

DOES NOT MEET CRITERIA:

- Continued NICU when all discharge criteria met and infant physiologically ready for transition
- Continued stay solely for convenience, non-medical placement, or social reasons when medically ready
- Treatment/diagnostics that can be safely completed on outpatient basis

C. CONTINUED STAY / CONCURRENT REVIEW

DAILY review by neonatologist/attending. Continued stay justified if: active treatment ongoing, has not met discharge criteria, requires monitoring/services not available at lower level of care.

NOT JUSTIFIED: Awaiting elective outpatient testing, awaiting non-medical placement, observation beyond standard monitoring period when clinically reassuring

D. DISCHARGE CRITERIA — Safe Transition to Next Level of Care

- Condition-specific milestones met (see clinical guidelines in Evidence Sources)
- Physiologically stable: temperature, respiratory, cardiovascular, feeding
- Appropriate weight gain trajectory (≥ 20 -30 g/day)
- Parents/caregivers trained on condition-specific care
- Follow-up arranged with appropriate specialists
- Equipment/supplies arranged if needed

E. EVIDENCE SOURCES

See condition-specific AAP Clinical Reports and specialty society guidelines. AAP: Hospital Discharge of High-Risk Neonate. Pediatrics. 2008;122:1119-1126. Reaffirmed 2022. Vermont Oxford Network. VON. 2024.

F. MS-DRG CROSSWALK & REVENUE CODES

DRG 790 (if preterm RW ~4.54), DRG 793 (Full Term w Major Problems RW ~1.58) Rev 0173-0174, 0410 (Respiratory — ventilator, iNO), 0636 (Drugs — surfactant, iNO)

G. GOAL LENGTH OF STAY (UNCOMPLICATED CASE)

Goal LOS: 7-14 days Source: AAP MAS Clinical Report (2021)

H. LEVEL OF CARE (LOC) GRID — PUBLIC-SOURCE STANDARDIZED CRITERIA

- ICU (NICU Level III/IV): Mechanical ventilation, HFOV/HFJV/iNO, vasoactives, therapeutic hypothermia, ECMO, post-cardiac surgery, surgical NEC, GA <32 weeks or BW <1500 g per AAP Level III; complex congenital surgery requires Level IV.
- Stepdown (NICU Level II): CPAP/HFNC, gavage feeds advancing, weight gaining, on antibiotics, monitoring for apnea of prematurity per AAP Level II.

- Med-Surg (Newborn Nursery / Continuing Care): Term/late preterm with stable VS, oral feeds, room air, weight gaining, awaiting discharge teaching.
- Observation: Generally not applicable; well-baby observation falls under newborn nursery billing.
- Post-Acute (Home, with or without HHA / Level II step-down): May transition to Level II hospital closer to home prior to discharge.
- Home (with/without HHA): Per AAP discharge criteria: stable in open crib, feeding orally with weight gain, room air or stable home O₂, parental competency, car-seat test passed, follow-up pediatrics/neonatology in 1 week; HHA for home apnea monitor, oxygen, NG feeds.

LOC Grid Sources: AAP Levels of Neonatal Care (2023, Pediatrics 152:e2023061851); AAP Hospital Discharge of the High-Risk Neonate (2008, reaffirmed 2022); CMS MS-DRG 789-795.

I. EXTENDED STAY CRITERIA & GUIDANCE

When Goal LOS is exceeded, continued inpatient stay requires documentation of ONE OR MORE of the following medical-necessity triggers. Document the specific trigger, the clinical evidence supporting it, and the targeted intervention plan.

- Continued respiratory support (CPAP, HFNC, supplemental O₂) without weaning to room air
- Apnea of prematurity not yet resolved (event-free interval not yet met per AAP)
- Inability to achieve full oral feeds and weight gain in open crib
- Newly identified comorbidity (e.g., ROP requiring laser, IVH progression, BPD)
- Failure of parent/caregiver education and competency demonstration

Extended Stay Sources: Sources: AAP Levels of Neonatal Care (2023); AAP Hospital Discharge of the High-Risk Neonate (2008, reaffirmed 2022).

PATENT DUCTUS ARTERIOSUS (PDA) — HEMODYNAMICALLY SIGNIFICANT

ICD-10-CM: Q25.0 (patent ductus arteriosus). ICD-10-PCS: 02LS0ZZ (occlusion of ductus arteriosus open), 02LS3ZZ (percutaneous), 02LS4ZZ (percutaneous endoscopic). CPT: 33820 (repair PDA by ligation), 33822 (by division), 93582 (percutaneous transcatheter closure)

A. ADMISSION CRITERIA — Severity of Illness (SI) / Intensity of Service (IS)

SEVERITY OF ILLNESS (SI) — Must meet ≥ 2 (hemodynamic significance):

- Echo: PDA diameter > 1.5 mm with left-to-right shunting
- LA:Ao ratio > 1.4 (left atrial enlargement from volume overload)
- Diastolic flow reversal in descending aorta (steal phenomenon)
- Bounding peripheral pulses with widened pulse pressure
- Increasing ventilator/O₂ requirements attributed to PDA
- Failure to wean from respiratory support
- Feeding intolerance or NEC concerns attributed to mesenteric steal

INTENSITY OF SERVICE (IS) — Must meet ≥ 1 :

- Pharmacologic closure: indomethacin (0.2mg/kg IV q12-24h x 3 doses) OR ibuprofen lysine (10mg/kg then 5mg/kg x 2 doses) OR IV

acetaminophen (15mg/kg q6h x 3-7 days)

- Surgical ligation (if failed pharmacologic or contraindicated)
- Transcatheter device closure (in select larger infants)
- Fluid restriction (120-140 mL/kg/day) and diuretics as bridge

B. OBSERVATION vs INPATIENT DECISION MATRIX

ALWAYS INPATIENT — NICU or special care nursery level required

DOES NOT MEET CRITERIA:

- Continued NICU when all discharge criteria met and infant physiologically ready for transition
- Continued stay solely for convenience, non-medical placement, or social reasons when medically ready
- Treatment/diagnostics that can be safely completed on outpatient basis

C. CONTINUED STAY / CONCURRENT REVIEW

DAILY review by neonatologist/attending. Continued stay justified if: active treatment ongoing, has not met discharge criteria, requires monitoring/services not available at lower level of care.

NOT JUSTIFIED: Awaiting elective outpatient testing, awaiting non-medical placement, observation beyond standard monitoring period when clinically reassuring

D. DISCHARGE CRITERIA — Safe Transition to Next Level of Care

- Condition-specific milestones met (see clinical guidelines in Evidence Sources)
- Physiologically stable: temperature, respiratory, cardiovascular, feeding
- Appropriate weight gain trajectory (≥ 20 -30 g/day)
- Parents/caregivers trained on condition-specific care
- Follow-up arranged with appropriate specialists
- Equipment/supplies arranged if needed

E. EVIDENCE SOURCES

See condition-specific AAP Clinical Reports and specialty society guidelines. AAP: Hospital Discharge of High-Risk Neonate. Pediatrics. 2008;122:1119-1126. Reaffirmed 2022. Vermont Oxford Network. VON. 2024.

F. MS-DRG CROSSWALK & REVENUE CODES

DRG 790-793 (Prematurity DRGs). If surgical ligation: DRG 820-822 (Congenital Cardiac Surgical) CPT 33820/33822 (ligation), 93582 (transcatheter closure) Rev 0173, 0360 (OR if ligation), 0481 (Cath Lab if device), 0250 (Pharmacy — indomethacin, ibuprofen lysine ~\$1000/course)

G. GOAL LENGTH OF STAY (UNCOMPLICATED CASE)

Goal LOS: Variable (within prematurity admission) Source: AAP PDA Statement (2020)

H. LEVEL OF CARE (LOC) GRID — PUBLIC-SOURCE STANDARDIZED CRITERIA

- ICU (NICU Level III/IV): Mechanical ventilation, HFOV/HFJV/iNO, vasoactives, therapeutic hypothermia, ECMO, post-cardiac surgery, surgical NEC, GA <32 weeks or BW <1500 g per AAP Level III; complex congenital surgery requires Level IV.
- Stepdown (NICU Level II): CPAP/HFNC, gavage feeds advancing, weight gaining, on antibiotics, monitoring for apnea of prematurity per AAP Level II.
- Med-Surg (Newborn Nursery / Continuing Care): Term/late preterm with stable VS, oral feeds, room air, weight gaining, awaiting discharge teaching.
- Observation: Generally not applicable; well-baby observation falls under newborn nursery billing.
- Post-Acute (Home, with or without HHA / Level II step-down): May transition to Level II hospital closer to home prior to discharge.
- Home (with/without HHA): Per AAP discharge criteria: stable in open crib, feeding orally with weight gain, room air or stable home O₂, parental competency, car-seat test passed, follow-up pediatrics/neonatology in 1 week; HHA for home apnea monitor, oxygen, NG feeds.

LOC Grid Sources: AAP Levels of Neonatal Care (2023, Pediatrics 152:e2023061851); AAP Hospital Discharge of the High-Risk Neonate (2008, reaffirmed 2022); CMS MS-DRG 789-795.

I. EXTENDED STAY CRITERIA & GUIDANCE

When Goal LOS is exceeded, continued inpatient stay requires documentation of ONE OR MORE of the following medical-necessity triggers. Document the specific trigger, the clinical evidence supporting it, and the targeted intervention plan.

- Continued respiratory support (CPAP, HFNC, supplemental O₂) without weaning to room air
- Apnea of prematurity not yet resolved (event-free interval not yet met per AAP)
- Inability to achieve full oral feeds and weight gain in open crib
- Newly identified comorbidity (e.g., ROP requiring laser, IVH progression, BPD)
- Failure of parent/caregiver education and competency demonstration

Extended Stay Sources: Sources: AAP Levels of Neonatal Care (2023); AAP Hospital Discharge of the High-Risk Neonate (2008, reaffirmed 2022).

INTRAVENTRICULAR HEMORRHAGE (IVH) GRADE III-IV

ICD-10-CM: P52.0 (IVH Grade 1 subependymal), P52.1 (IVH Grade 2), P52.21 (IVH Grade 3), P52.22 (IVH Grade 4 intraparenchymal), P52.3 (unspecified IVH), P52.4 (intracerebral hemorrhage), P52.5 (subarachnoid hemorrhage of newborn), P52.6 (cerebellar hemorrhage), P52.8 (other intracranial hemorrhage), P52.9 (intracranial hemorrhage unspecified), P91.1 (acquired periventricular cysts). ICD-10-PCS: 00160J6 (VP shunt), 009600Z (ventricular reservoir). CPT: 62220 (VP shunt creation), 62223 (VP shunt revision)

A. ADMISSION CRITERIA — Severity of Illness (SI) / Intensity of Service (IS)

SEVERITY OF ILLNESS (SI) — Must meet ≥ 1 :

- Head ultrasound showing Grade III IVH (blood filling and distending ventricle) or Grade IV (intraparenchymal hemorrhage)
- Rapidly increasing head circumference (>1 cm/week — post-hemorrhagic hydrocephalus)
- Bulging fontanelle, splayed sutures
- Clinical deterioration: increasing apnea/bradycardia, lethargy, seizures, decreased tone

INTENSITY OF SERVICE (IS) — Must meet ≥ 1 :

- Serial head ultrasound (weekly minimum for Grade III-IV)
- Serial head circumference measurements (daily)
- Neurosurgical consultation for: progressive hydrocephalus, ventricular reservoir (Ommaya) placement, VP shunt
- LP (therapeutic — serial lumbar punctures for temporary CSF drainage in post-hemorrhagic hydrocephalus)
- Correction of coagulopathy (vitamin K, FFP, platelets if DIC associated)

B. OBSERVATION vs INPATIENT DECISION MATRIX

ALWAYS INPATIENT — NICU or special care nursery level required

DOES NOT MEET CRITERIA:

- Continued NICU when all discharge criteria met and infant physiologically ready for transition
- Continued stay solely for convenience, non-medical placement, or social reasons when medically ready
- Treatment/diagnostics that can be safely completed on outpatient basis

C. CONTINUED STAY / CONCURRENT REVIEW

DAILY review by neonatologist/attending. Continued stay justified if: active treatment ongoing, has not met discharge criteria, requires monitoring/services not available at lower level of care.

NOT JUSTIFIED: Awaiting elective outpatient testing, awaiting non-medical placement, observation beyond standard monitoring period when clinically reassuring

D. DISCHARGE CRITERIA — Safe Transition to Next Level of Care

- Condition-specific milestones met (see clinical guidelines in Evidence Sources)
- Physiologically stable: temperature, respiratory, cardiovascular, feeding
- Appropriate weight gain trajectory (≥ 20 -30 g/day)
- Parents/caregivers trained on condition-specific care
- Follow-up arranged with appropriate specialists
- Equipment/supplies arranged if needed

E. EVIDENCE SOURCES

See condition-specific AAP Clinical Reports and specialty society guidelines. AAP: Hospital Discharge of High-Risk Neonate. Pediatrics. 2008;122:1119-1126. Reaffirmed 2022. Vermont Oxford Network. VON. 2024.

F. MS-DRG CROSSWALK & REVENUE CODES

DRG 790-791 (Prematurity with IVH as major problem). If VP shunt: DRG 023-025 (Craniotomy) CPT 62220 (VP shunt), 62223 (revision) Rev 0173-0174, 0402 (Head US serial), 0610 (MRI at term equivalent), 0360 (OR if shunt), 0270 (Shunt hardware)

G. GOAL LENGTH OF STAY (UNCOMPLICATED CASE)

Goal LOS: Variable (within prematurity admission) Source: AAP IVH Clinical Report (2020)

H. LEVEL OF CARE (LOC) GRID — PUBLIC-SOURCE STANDARDIZED CRITERIA

- ICU (NICU Level III/IV): Mechanical ventilation, HFOV/HFJV/iNO, vasoactives, therapeutic hypothermia, ECMO, post-cardiac surgery, surgical NEC, GA < 32 weeks or BW < 1500 g per AAP Level III; complex congenital surgery requires Level IV.
- Stepdown (NICU Level II): CPAP/HFNC, gavage feeds advancing, weight gaining, on antibiotics, monitoring for apnea of prematurity per AAP Level II.
- Med-Surg (Newborn Nursery / Continuing Care): Term/late preterm with stable VS, oral feeds, room air, weight gaining, awaiting discharge teaching.
- Observation: Generally not applicable; well-baby observation falls under newborn nursery billing.
- Post-Acute (Home, with or without HHA / Level II step-down): May transition to Level II hospital closer to home prior to discharge.
- Home (with/without HHA): Per AAP discharge criteria: stable in open crib, feeding orally with weight gain, room air or stable home O₂, parental competency, car-seat test passed, follow-up pediatrics/neonatology in 1 week; HHA for home apnea monitor, oxygen, NG feeds.

LOC Grid Sources: AAP Levels of Neonatal Care (2023, Pediatrics 152:e2023061851); AAP Hospital Discharge of the High-Risk Neonate (2008, reaffirmed 2022); CMS MS-DRG 789-795.

I. EXTENDED STAY CRITERIA & GUIDANCE

When Goal LOS is exceeded, continued inpatient stay requires documentation of ONE OR MORE of the following medical-necessity triggers. Document the specific trigger, the clinical evidence supporting it, and the targeted intervention plan.

- Continued respiratory support (CPAP, HFNC, supplemental O₂) without weaning to room air
- Apnea of prematurity not yet resolved (event-free interval not yet met per AAP)

- Inability to achieve full oral feeds and weight gain in open crib
- Newly identified comorbidity (e.g., ROP requiring laser, IVH progression, BPD)
- Failure of parent/caregiver education and competency demonstration

Extended Stay Sources: Sources: AAP Levels of Neonatal Care (2023); AAP Hospital Discharge of the High-Risk Neonate (2008, reaffirmed 2022).

NEONATAL SEIZURES

ICD-10-CM: P90 (convulsions of newborn), G40.301 (generalized idiopathic epilepsy not intractable with status epilepticus), G40.309 (without status epilepticus), G40.311 (intractable with status), G40.319 (intractable without status), G40.401 (other generalized epilepsy not intractable with status), G40.409 (without status), G40.411 (intractable with status), G40.419 (intractable without status)

A. ADMISSION CRITERIA — Severity of Illness (SI) / Intensity of Service (IS)

SEVERITY OF ILLNESS (SI) — Must meet ≥ 1 :

- Clinical seizures: clonic (rhythmic jerking), tonic (sustained posturing), myoclonic, or subtle (eye deviation, lip smacking, cycling, apnea)
- Electrographic seizures on continuous EEG/aEEG without clinical correlate (subclinical seizures common in neonates)
- Status epilepticus (continuous seizure > 5 min or recurrent without return to baseline)

INTENSITY OF SERVICE (IS) — Must meet ≥ 1 :

- Continuous EEG/aEEG monitoring (critical — clinical diagnosis alone misses 50-80% of neonatal seizures per ACNS guidelines)
- IV anticonvulsant: phenobarbital 20mg/kg loading (first-line per NEOLEV2 trial), additional 10mg/kg boluses up to 40mg/kg total; second-line: levetiracetam 40-60mg/kg or fosphenytoin 20mg/kg PE
- MRI brain (identify etiology: HIE, stroke, hemorrhage, infection, metabolic, structural)
- Metabolic workup: glucose, calcium, magnesium, sodium, ammonia, lactate, amino acids, urine organic acids

B. OBSERVATION vs INPATIENT DECISION MATRIX

ALWAYS INPATIENT — NICU or special care nursery level required

DOES NOT MEET CRITERIA:

- Continued NICU when all discharge criteria met and infant physiologically ready for transition
- Continued stay solely for convenience, non-medical placement, or social reasons when medically ready
- Treatment/diagnostics that can be safely completed on outpatient basis

C. CONTINUED STAY / CONCURRENT REVIEW

DAILY review by neonatologist/attending. Continued stay justified if: active treatment ongoing, has not met discharge criteria, requires monitoring/services not available at lower level of care.

NOT JUSTIFIED: Awaiting elective outpatient testing, awaiting non-medical placement, observation beyond standard monitoring period when clinically reassuring

D. DISCHARGE CRITERIA — Safe Transition to Next Level of Care

- Condition-specific milestones met (see clinical guidelines in Evidence Sources)
- Physiologically stable: temperature, respiratory, cardiovascular, feeding
- Appropriate weight gain trajectory (≥ 20 -30 g/day)
- Parents/caregivers trained on condition-specific care
- Follow-up arranged with appropriate specialists
- Equipment/supplies arranged if needed

E. EVIDENCE SOURCES

See condition-specific AAP Clinical Reports and specialty society guidelines. AAP: Hospital Discharge of High-Risk Neonate. Pediatrics. 2008;122:1119-1126. Reaffirmed 2022. Vermont Oxford Network. VON. 2024.

F. MS-DRG CROSSWALK & REVENUE CODES

DRG 793 (Full Term w Major Problems RW ~1.58), DRG 791 (Prematurity w Major Problems RW ~3.24) Rev 0173-0174, 0920 (Continuous EEG/aEEG), 0250 (Pharmacy — phenobarbital, levetiracetam), 0610 (MRI brain), 0300 (Lab)

G. GOAL LENGTH OF STAY (UNCOMPLICATED CASE)

Goal LOS: 7-14 days Source: AAP Neonatal Seizure Guidelines (Glass 2021)

H. LEVEL OF CARE (LOC) GRID — PUBLIC-SOURCE STANDARDIZED CRITERIA

- ICU (NICU Level III/IV): Mechanical ventilation, HFOV/HFJV/iNO, vasoactives, therapeutic hypothermia, ECMO, post-cardiac surgery, surgical NEC, GA <32 weeks or BW <1500 g per AAP Level III; complex congenital surgery requires Level IV.
- Stepdown (NICU Level II): CPAP/HFNC, gavage feeds advancing, weight gaining, on antibiotics, monitoring for apnea of prematurity per AAP Level II.
- Med-Surg (Newborn Nursery / Continuing Care): Term/late preterm with stable VS, oral feeds, room air, weight gaining, awaiting discharge teaching.
- Observation: Generally not applicable; well-baby observation falls under newborn nursery billing.
- Post-Acute (Home, with or without HHA / Level II step-down): May transition to Level II hospital closer to home prior to discharge.
- Home (with/without HHA): Per AAP discharge criteria: stable in open crib, feeding orally with weight gain, room air or stable home O₂, parental competency, car-seat test passed, follow-up pediatrics/neonatology in 1 week; HHA for home apnea monitor, oxygen, NG feeds.

LOC Grid Sources: AAP Levels of Neonatal Care (2023, Pediatrics 152:e2023061851); AAP Hospital Discharge of the High-Risk Neonate (2008, reaffirmed 2022); CMS MS-DRG 789-795.

I. EXTENDED STAY CRITERIA & GUIDANCE

When Goal LOS is exceeded, continued inpatient stay requires documentation of ONE OR MORE of the following medical-necessity triggers. Document the specific trigger, the clinical evidence supporting it, and the targeted intervention plan.

- Continued respiratory support (CPAP, HFNC, supplemental O₂) without weaning to room air
- Apnea of prematurity not yet resolved (event-free interval not yet met per AAP)
- Inability to achieve full oral feeds and weight gain in open crib
- Newly identified comorbidity (e.g., ROP requiring laser, IVH progression, BPD)
- Failure of parent/caregiver education and competency demonstration

Extended Stay Sources: Sources: AAP Levels of Neonatal Care (2023); AAP Hospital Discharge of the High-Risk Neonate (2008, reaffirmed 2022).

BRONCHOPULMONARY DYSPLASIA (BPD)

ICD-10-CM: P27.1 (bronchopulmonary dysplasia originating in perinatal period), P27.0 (Wilson-Mikity syndrome), P27.8 (other chronic respiratory diseases perinatal), P27.9 (unspecified respiratory condition perinatal), J84.841 (neuroendocrine cell hyperplasia of infancy)

A. ADMISSION CRITERIA — Severity of Illness (SI) / Intensity of Service (IS)

SEVERITY OF ILLNESS (SI) — Defined by O₂ requirement at 36 weeks PMA; must meet ≥1:

- Mild BPD: breathing room air at 36 weeks PMA (but needed O₂ at 28 days)
- Moderate BPD: FiO₂ <0.30 at 36 weeks PMA
- Severe BPD: FiO₂ ≥0.30 and/or positive pressure (CPAP/ventilator) at 36 weeks PMA
- NICHD 2019 severity grading (Grade 1-3 based on respiratory support at 36 weeks PMA)

INTENSITY OF SERVICE (IS) — Must meet ≥1:

- Supplemental O₂ to maintain SpO₂ target (typically 92-95%)
- Positive pressure support (CPAP, HFNC, or ventilator)
- Diuretics (furosemide, chlorothiazide/spironolactone) for fluid management
- Inhaled corticosteroids (budesonide) or systemic steroids (dexamethasone low-dose for ventilator-dependent: DART protocol)
- Home O₂ evaluation and equipment setup if approaching discharge on O₂

B. OBSERVATION vs INPATIENT DECISION MATRIX

ALWAYS INPATIENT — NICU or special care nursery level required

DOES NOT MEET CRITERIA:

- Continued NICU when all discharge criteria met and infant physiologically ready for transition
- Continued stay solely for convenience, non-medical placement, or social reasons when medically ready
- Treatment/diagnostics that can be safely completed on outpatient basis

C. CONTINUED STAY / CONCURRENT REVIEW

DAILY review by neonatologist/attending. Continued stay justified if: active treatment ongoing, has not met discharge criteria, requires monitoring/services not available at lower level of care.

NOT JUSTIFIED: Awaiting elective outpatient testing, awaiting non-medical placement, observation beyond standard monitoring period when clinically reassuring

D. DISCHARGE CRITERIA — Safe Transition to Next Level of Care

- Condition-specific milestones met (see clinical guidelines in Evidence Sources)
- Physiologically stable: temperature, respiratory, cardiovascular, feeding
- Appropriate weight gain trajectory (≥ 20 -30 g/day)
- Parents/caregivers trained on condition-specific care
- Follow-up arranged with appropriate specialists
- Equipment/supplies arranged if needed

E. EVIDENCE SOURCES

See condition-specific AAP Clinical Reports and specialty society guidelines. AAP: Hospital Discharge of High-Risk Neonate. Pediatrics. 2008;122:1119-1126. Reaffirmed 2022. Vermont Oxford Network. VON. 2024.

F. MS-DRG CROSSWALK & REVENUE CODES

DRG 790 (Extreme Immaturity/RDS RW ~4.54), DRG 791-792 (Prematurity) Rev 0173-0174, 0410 (Respiratory — O2, ventilator, CPAP, home O2 evaluation), 0250 (Pharmacy — diuretics, inhaled/systemic steroids, caffeine), 0300 (Lab — ABG, electrolytes)

G. GOAL LENGTH OF STAY (UNCOMPLICATED CASE)

Goal LOS: Variable; often 60-120+ days Source: NIH BPD Consensus Conference (Higgins 2018)

H. LEVEL OF CARE (LOC) GRID — PUBLIC-SOURCE STANDARDIZED CRITERIA

- ICU (NICU Level III/IV): Mechanical ventilation, HFOV/HFJV/iNO, vasoactives, therapeutic hypothermia, ECMO, post-cardiac surgery, surgical NEC, GA <32 weeks or BW <1500 g per AAP Level III; complex congenital surgery requires Level IV.
- Stepdown (NICU Level II): CPAP/HFNC, gavage feeds advancing, weight gaining, on antibiotics, monitoring for apnea of prematurity per AAP Level II.
- Med-Surg (Newborn Nursery / Continuing Care): Term/late preterm with stable VS, oral feeds, room air, weight gaining, awaiting discharge teaching.
- Observation: Generally not applicable; well-baby observation falls under newborn nursery billing.
- Post-Acute (Home, with or without HHA / Level II step-down): May transition to Level II hospital closer to home prior to discharge.
- Home (with/without HHA): Per AAP discharge criteria: stable in open crib, feeding orally with weight gain, room air or stable home O₂, parental competency, car-seat test passed, follow-up pediatrics/neonatology in 1 week; HHA for home apnea monitor, oxygen, NG feeds.

LOC Grid Sources: AAP Levels of Neonatal Care (2023, Pediatrics 152:e2023061851); AAP Hospital Discharge of the High-Risk Neonate (2008, reaffirmed 2022); CMS MS-DRG 789–795.

I. EXTENDED STAY CRITERIA & GUIDANCE

When Goal LOS is exceeded, continued inpatient stay requires documentation of ONE OR MORE of the following medical-necessity triggers. Document the specific trigger, the clinical evidence supporting it, and the targeted intervention plan.

- Continued respiratory support (CPAP, HFNC, supplemental O₂) without weaning to room air
- Apnea of prematurity not yet resolved (event-free interval not yet met per AAP)
- Inability to achieve full oral feeds and weight gain in open crib
- Newly identified comorbidity (e.g., ROP requiring laser, IVH progression, BPD)
- Failure of parent/caregiver education and competency demonstration

Extended Stay Sources: Sources: AAP Levels of Neonatal Care (2023); AAP Hospital Discharge of the High-Risk Neonate (2008, reaffirmed 2022).

VERY LOW BIRTH WEIGHT (1000-1499G) / MODERATE PREMATURETY (28-33 WEEKS)

ICD-10-CM: P07.14 (low birth weight 1000-1249g), P07.15 (1250-1499g), P07.16 (1500-1749g), P07.17 (1750-1999g), P07.18 (2000-2499g), P07.31 (preterm 28 weeks), P07.32 (29 weeks), P07.33 (30 weeks), P07.34 (31 weeks), P07.35 (32 weeks), P07.36 (33 weeks), Z38.00 (single liveborn vaginally), Z38.01 (by cesarean)

A. ADMISSION CRITERIA — Severity of Illness (SI) / Intensity of Service (IS)

SEVERITY OF ILLNESS (SI) — Must meet ≥ 1 :

- Gestational age 28-33 weeks or birth weight 1000-1499g
- Respiratory distress requiring supplemental O₂, CPAP, or ventilator
- Feeding intolerance requiring gavage feeds or TPN
- Thermoregulatory instability requiring isolette
- Apnea of prematurity

- Hyperbilirubinemia requiring phototherapy
- Hypoglycemia requiring IV dextrose

INTENSITY OF SERVICE (IS) — Must meet ≥ 1 :

- NICU or special care nursery (Level II-III) monitoring
- Respiratory support (O₂, CPAP, ventilator)
- IV fluids or TPN
- Phototherapy
- q3-4h vital signs with continuous cardiorespiratory monitoring

B. OBSERVATION vs INPATIENT DECISION MATRIX

ALWAYS INPATIENT — NICU or special care nursery level required

DOES NOT MEET CRITERIA:

- Continued NICU when all discharge criteria met and infant physiologically ready for transition
- Continued stay solely for convenience, non-medical placement, or social reasons when medically ready
- Treatment/diagnostics that can be safely completed on outpatient basis

C. CONTINUED STAY / CONCURRENT REVIEW

DAILY review by neonatologist/attending. Continued stay justified if: active treatment ongoing, has not met discharge criteria, requires monitoring/services not available at lower level of care.

NOT JUSTIFIED: Awaiting elective outpatient testing, awaiting non-medical placement, observation beyond standard monitoring period when clinically reassuring

D. DISCHARGE CRITERIA — Safe Transition to Next Level of Care

- Condition-specific milestones met (see clinical guidelines in Evidence Sources)
- Physiologically stable: temperature, respiratory, cardiovascular, feeding
- Appropriate weight gain trajectory (≥ 20 -30 g/day)
- Parents/caregivers trained on condition-specific care
- Follow-up arranged with appropriate specialists
- Equipment/supplies arranged if needed

E. EVIDENCE SOURCES

See condition-specific AAP Clinical Reports and specialty society guidelines. AAP: Hospital Discharge of High-Risk Neonate. Pediatrics. 2008;122:1119-1126. Reaffirmed 2022. Vermont Oxford Network. VON. 2024.

F. MS-DRG CROSSWALK & REVENUE CODES

DRG 791 (Prematurity w Major Problems RW ~3.24), DRG 792 (w/o Major Problems RW ~2.01), DRG 794 (Other Significant Problems RW ~0.95) Rev 0172 (Level II), 0173 (Level III)

G. GOAL LENGTH OF STAY (UNCOMPLICATED CASE)

Goal LOS: 30-60 days Source: AAP VLBW Clinical Report (2022); CMS MS-DRG 791

H. LEVEL OF CARE (LOC) GRID — PUBLIC-SOURCE STANDARDIZED CRITERIA

- ICU (NICU Level III/IV): Mechanical ventilation, HFOV/HFJV/iNO, vasoactives, therapeutic hypothermia, ECMO, post-cardiac surgery, surgical NEC, GA <32 weeks or BW <1500 g per AAP Level III; complex congenital surgery requires Level IV.
- Stepdown (NICU Level II): CPAP/HFNC, gavage feeds advancing, weight gaining, on antibiotics, monitoring for apnea of prematurity per AAP Level II.
- Med-Surg (Newborn Nursery / Continuing Care): Term/late preterm with stable VS, oral feeds, room air, weight gaining, awaiting discharge teaching.
- Observation: Generally not applicable; well-baby observation falls under newborn nursery billing.
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- Home (with/without HHA): Per AAP discharge criteria: stable in open crib, feeding orally with weight gain, room air or stable home O₂, parental competency, car-seat test passed, follow-up pediatrics/neonatology in 1 week; HHA for home apnea monitor, oxygen, NG feeds.

LOC Grid Sources: AAP Levels of Neonatal Care (2023, Pediatrics 152:e2023061851); AAP Hospital Discharge of the High-Risk Neonate (2008, reaffirmed 2022); CMS MS-DRG 789-795.

I. EXTENDED STAY CRITERIA & GUIDANCE

When Goal LOS is exceeded, continued inpatient stay requires documentation of ONE OR MORE of the following medical-necessity triggers. Document the specific trigger, the clinical evidence supporting it, and the targeted intervention plan.

- Continued respiratory support (CPAP, HFNC, supplemental O₂) without weaning to room air
- Apnea of prematurity not yet resolved (event-free interval not yet met per AAP)
- Inability to achieve full oral feeds and weight gain in open crib
- Newly identified comorbidity (e.g., ROP requiring laser, IVH progression, BPD)
- Failure of parent/caregiver education and competency demonstration

Extended Stay Sources: Sources: AAP Levels of Neonatal Care (2023); AAP Hospital Discharge of the High-Risk Neonate (2008, reaffirmed 2022).