EMT OB/GYN & Pediatrics Study Guide

www.emsnotes.com By Forrest Munden | 2025-2026 Edition | NREMT Aligned

Section 1: OB Emergencies & Normal Delivery

Key Concept: In pregnancy, you have TWO patients. The mother's wellbeing directly affects the fetus. Treat mom first.

Pregnancy Terminology

Term	Definition
Gravida	Total number of pregnancies (G)
Para	Number of deliveries after 20 weeks (P)
Term	37-42 weeks gestation
Preterm	<37 weeks gestation
Crowning	Baby's head visible at vaginal opening
Presenting Part	Part of baby that emerges first (normally head)

Stages of Labor

Stage	Description	Duration
First Stage	Contractions begin → cervix fully dilated (10cm)	Hours to 1+ day (longer for first pregnancy)
Second Stage	Fully dilated → delivery of baby	Minutes to 2 hours
Third Stage	Baby delivered → placenta delivered	Up to 30 minutes

Signs of Imminent Delivery

⚠ **Stay on Scene if:** Contractions <2 min apart, urge to push, crowning, or bulging perineum

- Strong contractions less than 2 minutes apart
- Mother feels urge to push or have bowel movement
- Crowning visible
- Bulging perineum
- Previous rapid deliveries (multiparous)

Normal Delivery Procedure (EMT)

1. Position mother on back, knees drawn up, or left lateral
2. Apply gentle pressure to baby's head to control delivery (don't push back)
3. Check for nuchal cord (cord around neck) — slip over head or clamp/cut
4. Suction mouth then nose (only if meconium or obvious obstruction)
5. Support body as shoulders and torso deliver
6. Dry, warm, stimulate baby immediately
7. Clamp cord in two places (4" and 6" from baby), cut between clamps
8. Place baby skin-to-skin on mother's chest, cover both
9. Watch for placenta delivery — DO NOT pull on cord

10. Massage uterine fundus to control bleeding after placenta delivers

OB Complications

Complication	Signs	EMT Actions
Prolapsed Cord	Cord visible/palpable before baby	Position mom knee-chest or Trendelenburg, push presenting part off cord (gloved fingers), keep cord moist, rapid transport
Breech Presentation	Buttocks or feet present first	Do NOT pull, support baby, if head trapped: create airway with fingers, rapid transport
Placenta Previa	Painless bright red vaginal bleeding (3rd trimester)	Do NOT examine vaginally, O2, left lateral, rapid transport
Placental Abruption	Painful, dark bleeding, rigid abdomen	Treat for shock, left lateral, rapid transport
Eclampsia	Seizures in pregnant patient with HTN/edema	Protect from injury, left lateral, suction PRN, O2, rapid transport
Postpartum Hemorrhage	>500mL blood loss after delivery	Fundal massage, treat for shock, transport with placenta

⚠ **Remember:** Never pull on the umbilical cord. Never pack the vagina. Position pregnant patients left lateral to prevent supine hypotension.

Section 2: Neonatal Resuscitation

Immediate Newborn Care

> **First 30 Seconds:** Dry, Warm, Position, Suction (only if needed), Stimulate

Action	Details
Dry	Vigorously dry with warm towels, remove wet linens
Warm	Skin-to-skin or warm blankets, cover head
Position	Sniffing position (slight neck extension)
Suction	Only if secretions blocking airway — mouth then nose
Stimulate	Flick soles of feet, rub back

APGAR Score

Sign	0 Points	1 Point	2 Points
Appearance (color)	Blue/pale all over	Pink body, blue extremities	Completely pink
Pulse	Absent	<100 bpm	≥100 bpm
Grimace (reflex)	No response	Grimace	Cough, sneeze, cry
Activity (tone)	Limp	Some flexion	Active movement
Respirations	Absent	Slow, irregular	Good, crying

Score at 1 and 5 minutes: 7-10 = Normal, 4-6 = Moderate depression, 0-3 = Severe depression

Neonatal Resuscitation Algorithm

> **Decision Point:** After initial steps, assess HR and breathing. Heart rate drives intervention!

Assessment	Intervention
HR >100, breathing, pink	Routine care, keep warm, continue monitoring
HR <100 OR not breathing effectively	PPV with room air at 40-60 breaths/min
HR <60 after 30 sec PPV	Continue PPV, start chest compressions (3:1 ratio)
HR still <60 after compressions	Consider epinephrine (ALS), continue CPR

Neonatal BVM Technique

- Use appropriately sized mask (covers mouth and nose, not eyes)
- Rate: 40-60 breaths/minute (about 1 breath per second)
- Watch for chest rise — use minimal pressure
- If no chest rise: reposition, suction, try again

Chest Compressions in Newborn

- **Technique:** Two-thumb encircling method preferred
- **Depth:** 1/3 AP diameter of chest (about 1.5 inches)
- **Location:** Lower 1/3 of sternum
- **Ratio:** 3 compressions : 1 ventilation (3:1)
- **Rate:** 120 events/minute (90 compressions + 30 breaths)

> **Temperature is Critical:** Newborns lose heat rapidly. Hypothermia worsens outcomes. Keep baby warm!

Section 3: Pediatric Assessment

Pediatric Assessment Triangle (PAT)

> **First Impression:** Assess from the doorway BEFORE touching the child

Component	What to Assess	Concerning Signs
Appearance	Tone, interactiveness, consolability, look/gaze, speech/cry (TICLS)	Limp, unresponsive, inconsolable, glassy stare, weak cry
Work of Breathing	Sounds, positioning, retractions, nasal flaring	Stridor, grunting, tripod position, severe retractions
Circulation	Skin color	Pallor, mottling, cyanosis

Pediatric Vital Signs by Age

Age	Heart Rate	Respiratory Rate	Systolic BP
Newborn	120-160	30-60	60-90
Infant (1-12 mo)	100-150	25-50	70-90
Toddler (1-3 yr)	90-140	20-30	80-100
Preschool (3-5 yr)	80-120	20-25	80-110
School Age (6-12 yr)	70-110	15-20	90-120
Adolescent (13+ yr)	60-100	12-20	100-130

Minimum systolic BP formula: 70 + (2 × age in years)

Common Pediatric Emergencies

Condition	Key Signs	EMT Management
Croup	Barking cough, stridor, fever, age 6mo-4yr	Keep calm, blow-by O2, humidified air, transport sitting up
Epiglottitis	High fever, drooling, tripod position, muffled voice	DO NOT examine throat, allow position of comfort, rapid transport
Bronchiolitis	Wheezing, increased WOB, runny nose, age <2yr (RSV)	Suction, O2, monitor closely, transport
Asthma	Wheezing, prolonged expiration, tripod, accessory muscles	Assist with prescribed inhaler, O2, calm environment
Febrile Seizure	Generalized seizure with fever, age 6mo-5yr	Protect from injury, don't restrain, cool gradually, monitor airway
Meningitis	Fever, stiff neck, altered mental status, rash	Isolate, O2, rapid transport, notify receiving facility

Pediatric Airway Differences

- **Large head/occiput:** Place padding under shoulders for alignment
- **Large tongue:** More easily obstructs airway
- **Smaller airways:** More easily obstructed by swelling/secretions
- **Obligate nose breathers:** Infants <6 months — suction nose
- **Soft tracheal cartilage:** Avoid hyperextension

> ⚠ **Children Compensate Well:** By the time they decompensate, they're critically ill. Don't be fooled by normal vitals in a sick-looking child.

Section 4: Pediatric Emergencies & Special Situations

Pediatric Trauma Considerations

Difference	Implication
Larger head-to-body ratio	Higher risk of head injury
More pliable skeleton	Internal injuries without obvious fractures
Abdominal organs less protected	Higher risk of solid organ injury
Greater body surface area	Lose heat faster, higher burn mortality
Psychological impact	Fear, regression — approach calmly

Child Abuse Recognition

> ⚠ **You Are a Mandated Reporter:** Document objectively, report suspicion to appropriate authorities

Physical Indicators:

- Injuries inconsistent with stated history
- Multiple bruises in various stages of healing
- Patterned injuries (belt marks, cigarette burns)
- Injuries to unusual locations (inner thighs, back, buttocks)
- Delay in seeking care

Behavioral Indicators:

- Fear of parents or caregivers
- Inappropriate affect (too calm for injuries)
- Caregiver story changes or conflicts with child's story

SIDS (Sudden Infant Death Syndrome)

- Unexpected death of infant <1 year during sleep
- Peak incidence: 2-4 months of age
- Attempt resuscitation unless obvious signs of death
- Support family — they need compassion, not blame
- Scene will be investigated — document carefully, don't disturb scene unnecessarily

Pediatric Dehydration Assessment

Severity	Signs
Mild	Slightly dry mucous membranes, normal tears, normal skin turgor
Moderate	Decreased tears, sunken fontanelle, delayed cap refill (2-3 sec)
Severe	No tears, very sunken fontanelle, cool/mottled skin, lethargy, cap refill >3 sec

Approach to Pediatric Patients

> **Tips for Success:**

- Get down to their level — kneel or sit
- Speak to the child, not just the parents
- Use simple language appropriate for age
- Let them see/touch equipment first when possible
- Keep parent/caregiver nearby when safe to do so

- Exam: Least invasive first, save painful procedures for last
- Distraction works — let them hold a toy or penlight

Section 5: Clinical Judgment Questions

Test Your Knowledge: Think through each scenario before reading the rationale.

1. A woman in labor is crowning. You see the umbilical cord wrapped around the baby's neck. What should you do?

A) Push the baby back and transport immediately
B) Clamp and cut the cord immediately
C) Attempt to slip the cord over the baby's head
D) Stop the delivery until arrival at hospital

Answer: C — First attempt to gently slip the cord over the baby's head. If too tight to slip, then clamp in two places and cut between clamps, then continue delivery. Never push the baby back.

2. A newborn is delivered and is limp, blue, and not breathing after drying and stimulation. Heart rate is 80 bpm. What is your next action?

A) Begin chest compressions
B) Administer blow-by oxygen
C) Begin positive pressure ventilation
D) Continue stimulation for another 30 seconds

Answer: C — HR is <100 and baby is not breathing effectively. PPV is indicated. Chest compressions start only if HR remains <60 after 30 seconds of effective PPV.

3. A 3-year-old has a barking cough, stridor on inspiration, and mild retractions. He has a low-grade fever. What is the most likely diagnosis?

A) Epiglottitis
B) Croup
C) Foreign body aspiration
D) Asthma

Answer: B (Croup) — Barking "seal-like" cough with inspiratory stridor, low-grade fever, in a toddler is classic croup. Epiglottitis typically has HIGH fever, drooling, and no barking cough.

4. You respond to a 2-year-old found unresponsive in her crib. She has dependent lividity and is cool to touch. The mother is hysterical. What is your priority?

A) Begin aggressive CPR immediately
B) Withhold resuscitation, provide supportive care to family
C) Transport immediately while performing CPR
D) Contact medical control before making any decisions

Answer: B — Dependent lividity indicates death occurred some time ago and is an obvious sign of death. Resuscitation is not indicated. Focus on supporting the family and following SIDS protocols (careful documentation, notify appropriate authorities).

5. A 4-year-old has multiple bruises on his back and buttocks in different stages of healing. The caregiver says he fell down the stairs. What should you do?

A) Confront the caregiver about suspected abuse
B) Document findings objectively, report to appropriate authorities
C) Only report if the child states they were abused
D) Take photographs and question the child extensively

Answer: B — Document objectively what you see and hear. You are a mandated reporter — report your suspicions to appropriate authorities (CPS, law enforcement, hospital staff). Don't confront, interrogate, or delay

> transport to investigate.