2026 NGN NCLEX-RN · LABOR & DELIVERY · DAY 13 OF 16

Infection in Labor: GBS, Chorioamnionitis, HIV, HSV, Hepatitis B & Newborn Prevention

Recognize the febrile laboring client. Stop vertical transmission. Time antibiotics correctly. Decide who delivers vaginally and who needs a cesarean — and make the newborn safe from minute one.

CLINICAL JUDGMENT | INFECTION PREVENTION | PHARMACOLOGY | MATERNAL-FETAL SAFETY | NGN ITEM TYPES

01 High-Yield Overview

Infection in labor is a **two-patient emergency**. The bacteria or virus colonizing the mother can cross to the fetus through ascending infection (GBS, chorioamnionitis), through contact with maternal blood and secretions during birth (HIV, HSV, hepatitis B), or through prolonged rupture of membranes. On the NGN exam, the nurse is expected to:

- **Recognize** the earliest signs of intra-amniotic infection (maternal fever ≥ 100.4°F/38°C, fetal tachycardia, foul-smelling fluid, uterine tenderness).
- **Time antibiotics correctly** — GBS prophylaxis ideally ≥ 4 hours before birth; chorioamnionitis = give antibiotics *now* and expedite delivery.
- **Choose the safest route of birth** — active HSV lesion or HIV viral load > 1,000 copies/mL = cesarean.
- **Protect the newborn** — HBIG + hepatitis B vaccine within 12 hours if mother is HBsAg-positive; delayed bath until after first feeding/temperature stable; infant ART for HIV-exposed.

Every question on this topic is really asking one thing: *"What finding is most dangerous for mother or fetus, and what should the nurse do first?"* The infection lesson is one of the highest-yield prioritization topics on the NGN — fever in labor is never *just a fever*.

02 10 Must-Know Rules

01 **GBS-positive screen (35–37 wk) or unknown status with risk factors → IV penicillin G in labor.** Goal: ≥ 4 hours before birth for adequate fetal blood levels. Less than 4 hours = inadequate prophylaxis, monitor newborn.

02 **Penicillin allergy?** Mild (rash) → cefazolin. Severe (anaphylaxis) → clindamycin *only if* susceptibility confirmed; otherwise vancomycin.

03 **Chorioamnionitis (intra-amniotic infection) is diagnosed by maternal fever ≥ 39°C, or 38–38.9°C plus another sign** (fetal tachycardia > 160, maternal WBC > 15,000, purulent cervical discharge). Treat = broad-spectrum IV antibiotics (commonly ampicillin + gentamicin) **and expedite delivery** — infection is not an indication to slow labor.

04 **After rupture of membranes (SROM or AROM), the nurse's priority is fetal heart rate first** (to rule out cord prolapse), then color/odor of fluid, then maternal temperature. Recheck temp at least every 2 hours after ROM.

05 **Prolonged ROM > 18 hours = elevated risk of chorioamnionitis and neonatal sepsis.** GBS prophylaxis is indicated even if the screen was negative when ROM > 18 h with other risk factors, per policy. Newborn observation extended.

06 **HIV-positive client with viral load > 1,000 copies/mL at 34–36 weeks → scheduled cesarean at 38 weeks, BEFORE labor or ROM.** Continue maternal antiretrovirals; add IV zidovudine intrapartum per protocol.

07 **For HIV-positive clients, AVOID:** artificial rupture of membranes, internal fetal scalp electrode, fetal scalp blood sampling, operative vaginal delivery (vacuum/forceps), and routine episiotomy — all increase vertical transmission.

08 **Active genital HSV lesions or prodromal symptoms (tingling, burning) at labor onset = cesarean birth.** No lesions and no prodrome at onset of labor = vaginal birth is acceptable; suppressive acyclovir is given from 36 weeks to delivery in clients with recurrent HSV.

09 **HBsAg-positive mother → newborn receives HBIG (hepatitis B immune globulin) AND hepatitis B vaccine within 12 hours of birth**, given at two different sites. This combination prevents up to 95% of perinatal transmission. Breastfeeding is *not* contraindicated.

10 **Every newborn gets erythromycin eye ointment (prevents gonococcal/chlamydial ophthalmia neonatorum) and vitamin K IM (prevents VKDB)** within 1 hour of birth. First bath is delayed until temperature is stable AND, for HIV/HBV exposure, after the infant receives initial prophylaxis when bathing reduces blood-borne pathogen risk.

03 Maternal–Fetal Safety Table

FINDING	WHAT IT MEANS	MOTHER RISK	FETAL/NEWBORN RISK	PRIORITY NURSING ACTION	WHEN TO ESCALATE
Maternal T ≥ 100.4°F (38°C) in labor	Suspect chorioamnionitis or other infection	Sepsis, endometritis, hemorrhage from atony	Tachycardia, neonatal sepsis, pneumonia, encephalopathy	Recheck temp, FHR, contractions; notify provider; anticipate broad-spectrum IV antibiotics and labs	Any single temp ≥ 39°C, or 38–38.9°C with fetal tachycardia → notify now
Foul-smelling amniotic fluid	Bacterial overgrowth in uterus	Septic shock, postpartum infection	Neonatal sepsis, NICU admission	Document odor, send fluid/blood cultures per order, give antibiotics, prepare for delivery	Immediate provider notification
Fetal tachycardia > 160 sustained > 10 min	Possible chorioamnionitis, maternal fever, dehydration, hypoxia	Underlying infection or volume status	Hypoxia, sepsis, acidosis if persistent with minimal variability	Check maternal temp, hydration, position; assess variability; intrauterine resuscitation (left side, IV bolus, O_2 per policy)	Persistent tachycardia + minimal variability or decelerations = Category II/III workup
Uterine tenderness between contractions	Intra-amniotic infection	Sepsis, hemorrhage	Neonatal sepsis	Notify provider, anticipate antibiotics + delivery	Notify now — do not wait for fever
GBS-positive, in labor, < 4 h since first dose of penicillin	Inadequate intrapartum prophylaxis	Postpartum endometritis	Early-onset GBS sepsis, pneumonia, meningitis	Document time of dose, notify provider, plan extended newborn observation per protocol	If delivery imminent — notify nursery
Active HSV lesion or prodrome at labor onset	Risk of neonatal HSV (often fatal)	Cesarean recovery risks	Neonatal HSV: skin/eye/mouth, CNS, or disseminated disease	Notify provider immediately; prepare for cesarean; do not perform vaginal	Always — surgical birth required

FINDING	WHAT IT MEANS	MOTHER RISK	FETAL/NEWBORN RISK	PRIORITY NURSING ACTION	WHEN TO ESCALATE
				exams unless essential	
HIV-positive client, viral load > 1,000 copies/mL, ROM occurs	Vertical transmission window opens	Surgical risks if cesarean	Transmission rises with duration of ROM	Notify provider STAT; expedite delivery (often cesarean); IV zidovudine; avoid invasive monitors	Immediate
HBsAg-positive mother	Chronic or acute hep B; transmission at birth	Standard precautions	Chronic hep B infection if no prophylaxis	Confirm orders for HBIG + hep B vaccine within 12 h; bathe newborn before injections per policy	If orders missing — notify nursery and provider
Prolonged ROM > 18 h	Ascending infection risk	Chorioamnionitis, postpartum infection	Early-onset neonatal sepsis	Monitor temp q 2 h; antibiotics per protocol; assess for infection signs in mother and fetus	Maternal fever or fetal tachycardia → notify provider
Maternal HR > 120 in labor (not epidural-related)	Possible sepsis, dehydration, hemorrhage, embolism	Septic shock, cardiovascular collapse	Compromised placental perfusion	Full vital signs, FHR, infection workup; IV fluids; notify provider	Persistent HR > 120 with hypotension or fever → rapid response

04 Red-Flag Cues

IMMEDIATE ASSESSMENT

Maternal T ≥ 38°C · fetal HR > 160 sustained · foul-smelling amniotic fluid · uterine tenderness between contractions · maternal HR > 120 · purulent discharge · sudden hypotension after fever (early septic shock).

REPOSITION · IV BOLUS (IF ORDERED) · OXYGEN ONLY PER POLICY

Fetal tachycardia in a febrile client: lateral position, IV crystalloid bolus per order, treat the maternal fever (acetaminophen), reduce maternal exertion. Oxygen is no longer routine for non-reassuring tracings — give only if hypoxemia is documented or institutional policy directs it.

STOP OXYTOCIN

If the febrile client is on oxytocin and the tracing becomes Category II/III (recurrent late or prolonged decelerations, minimal variability with tachycardia), pause oxytocin while you resuscitate intrauterinely. Treat the infection. Restart only after the tracing is reassuring and per provider order.

PROVIDER NOTIFICATION — NOW

Any maternal fever, any foul fluid, any fetal tachycardia > 10 minutes, any HIV-positive client with ROM, any active HSV lesion in labor, any missing GBS results in a laboring client at term with ROM > 18 h.

RAPID RESPONSE / EMERGENCY BIRTH PREP

Septic shock signs (hypotension, altered mental status, oliguria, lactate rising) · suspected uterine rupture in febrile client · Category III tracing not resolving with resuscitation · cord prolapse · maternal seizure with hyperthermia (consider eclampsia vs sepsis).

05 Medication Safety

Penicillin G (GBS prophylaxis)

Why given	Intrapartum prophylaxis against early-onset neonatal GBS sepsis in GBS-positive or high-risk clients.
Assess before	Allergy to penicillin/cephalosporins (cross-reactivity ~1%), GBS status, time of last dose, time of ROM.
Most dangerous adverse effect	Anaphylaxis — laryngeal edema, hypotension, bronchospasm.
Hold/notify	Hold and notify if any anaphylaxis sign; if penicillin allergy is reported and no order for alternative is in place.
Antidote / reversal	Epinephrine IM (anaphylaxis), oxygen, IV fluids, antihistamines, corticosteroids.
Monitoring	Vital signs, respiratory effort, skin first 30 min after each dose; document dose time clearly (4-hour rule).
Teaching	Why it's given for baby's safety; report itching, throat tightness, dizziness immediately.
NCLEX trap	Giving cefazolin to a client with anaphylactic penicillin allergy. Cefazolin is only safe for mild penicillin reactions; severe reactions = clindamycin (if susceptible) or vancomycin.

Ampicillin + Gentamicin (Chorioamnionitis)

Why given	Broad-spectrum coverage of polymicrobial intra-amniotic infection; reduces maternal and neonatal morbidity.
Assess before	Allergies, baseline BUN/creatinine (gentamicin), pregnancy considerations.
Most dangerous adverse effect	Gentamicin: nephrotoxicity, ototoxicity. Ampicillin: anaphylaxis, C. difficile risk.
Hold/notify	Rising creatinine, hearing changes, oliguria. Allergic reactions.
Monitoring	Renal function, drug levels per protocol (peak/trough), I&O, fetal heart rate.
Teaching	Antibiotics will continue postpartum until fever-free; report ringing in ears, decreased urine.
NCLEX trap	"Wait until cultures result." NO — empiric antibiotics begin immediately when chorioamnionitis is suspected; cultures don't delay treatment.

Acyclovir (HSV suppression / treatment)

Why given	Suppressive therapy from 36 weeks until delivery in clients with recurrent genital HSV; treats outbreaks.
Assess before	Renal function, hydration status, presence/location of lesions.
Most dangerous adverse effect	Nephrotoxicity (especially with dehydration or IV use), neurotoxicity.
Hold/notify	Rising creatinine, oliguria.
Monitoring	Hydration, urine output, renal labs.
Teaching	Take with adequate fluids; lesion inspection at labor onset; report new tingling/burning before delivery.
NCLEX trap	Believing suppressive therapy means vaginal birth is always safe — active lesion or prodrome at labor onset still requires cesarean.

Zidovudine (ZDV) — IV intrapartum (HIV)

Why given	Reduces vertical HIV transmission when maternal viral load is detectable, especially > 1,000 copies/mL; given as a loading dose then continuous infusion until cord clamp.
Assess before	Viral load, CD4, ART history, hemoglobin (ZDV can cause anemia), liver enzymes.
Most dangerous adverse effect	Bone marrow suppression (anemia, neutropenia), lactic acidosis, hepatotoxicity.
Hold/notify	Severe anemia, signs of lactic acidosis (nausea, abdominal pain, hyperventilation).
Monitoring	Maternal CBC, FHR, infusion rate (do not interrupt), prepare neonatal ZDV.
Teaching	Why infant will also receive ART; avoid breastfeeding in high-resource settings per current US guidance (shared decision in some scenarios).
NCLEX trap	Stopping the IV ZDV when the client goes to OR for cesarean. Continue until cord clamping.

Hepatitis B Immune Globulin (HBIG) + Hep B Vaccine — Newborn

Why given	Passive (HBIG) + active (vaccine) immunization for newborns of HBsAg-positive mothers — within 12 hours of birth.
Assess before	Maternal HBsAg status, weight, gestational age, contraindications (rare).
Most dangerous adverse effect	Anaphylaxis (rare), injection-site reactions.
Hold/notify	Prior anaphylaxis to a component.
Monitoring	Site, vital signs, ensure both injections given at different sites.

Teaching	Series continues at 1–2 months and 6 months; post-vaccination serology at 9–12 months. Breastfeeding is safe.
NCLEX trap	Giving only the vaccine — HBsAg-positive mothers' infants need BOTH HBIG and vaccine. HBsAg-negative mothers' infants get only the vaccine.

Erythromycin 0.5% Eye Ointment (Newborn)

Why given	Prevents gonococcal and chlamydial ophthalmia neonatorum; universal prophylaxis (US).
Assess before	Newborn identification, eye condition.
Adverse effect	Mild conjunctival irritation, blurred vision (transient).
Monitoring	Apply within 1 hour of birth; do not wipe off.
Teaching	Why it is given; baby may have temporarily blurred vision and yellow discharge from ointment — normal.
NCLEX trap	Skipping eye prophylaxis because parents say they have no STIs — it is universally administered in the US.

Vitamin K (Phytonadione) IM — Newborn

Why given	Prevents vitamin K deficiency bleeding (VKDB), including intracranial hemorrhage.
Assess before	Birth weight, parental consent (per institutional policy).
Adverse effect	Injection-site reaction (rare).
Monitoring	Vastus lateralis IM, single dose 0.5–1 mg within 1 h of birth.
Teaching	Oral vitamin K is not equivalent — increased risk of late VKDB. IM is standard.
NCLEX trap	Choosing deltoid — newborns receive IM in vastus lateralis (lateral thigh).

06 Fetal Monitoring in Infection

PARAMETER	EXPECTED IN INFECTION	PRIORITY INTERPRETATION
Baseline FHR	Rising baseline → tachycardia > 160 bpm	Earliest fetal sign of chorioamnionitis; precedes maternal fever in some cases.
Variability	Initially moderate; may decrease as infection worsens	Moderate variability is still reassuring even with tachycardia; minimal/absent variability with tachycardia is ominous.
Accelerations	May be absent in febrile fetus	Absence with tachycardia and decreased variability raises concern.
Decelerations	Variables possible (cord compression with ROM); late decelerations if uteroplacental insufficiency develops	Late decelerations in a febrile client = Category II → escalating workup.
Contraction pattern	May see tachysystole if oxytocin running; rule out abruption if pain + bleeding	Stop oxytocin for tachysystole; reassess infection vs other cause.
Category	Category I (normal) can persist early; tachycardia + minimal variability + recurrent decels = Category III (abnormal)	Category III = immediate intrauterine resuscitation + prepare for delivery.

NGN REASONING PROMPT

"Fetal tachycardia + maternal fever" is one of the highest-yield combinations on the NGN. Recognize it as **chorioamnionitis until proven otherwise**, even before the provider labels it. The first action is almost always: *recheck temp + FHR, notify provider, anticipate antibiotics* — not stopping at oxygen alone.

07 Advanced NGN Practice Questions

MULTIPLE CHOICE · RECOGNIZE CUES

Question 1

A nurse is admitting a client at 39 weeks' gestation who reports leaking fluid for the past 6 hours. After confirming rupture of membranes, what is the nurse's *first* action?

A. Obtain maternal temperature

B. Assess fetal heart rate

C. Note color and odor of the fluid

D. Notify the provider

Correct: B. The single most dangerous post-ROM complication is umbilical cord prolapse — fetal heart rate detects it first. **Assess FHR first.**

A. Temperature is important but not the first action — fetal compromise is the immediate danger. C. Fluid characteristics matter for infection and meconium but follow FHR. D. Notification follows assessment.

Trap: students confuse infection risk (temp/odor) with the acute fetal risk (cord prolapse). **Clinical judgment step:** Recognize cues.

SELECT ALL THAT APPLY · ANALYZE CUES

Question 2

A laboring client at 39 weeks with ROM × 16 hours has a temperature of 38.4°C (101.1°F). Which findings would the nurse recognize as consistent with chorioamnionitis? **Select all that apply.**

A. Fetal heart rate baseline 175 bpm

B. Uterine tenderness between contractions

C. Foul-smelling cloudy amniotic fluid

D. Maternal pulse 78

E. WBC 8,500/mm³

F. Maternal pulse 118

Correct: A, B, C, F. **Fetal tachycardia, uterine tenderness, foul fluid, and maternal tachycardia** are classic features along with fever.

D & E. Normal pulse and normal WBC argue against (though WBC alone is not diagnostic). **Trap:** overweighting a normal WBC; in pregnancy the leukocyte count is already mildly elevated, so WBC > 15,000 is more meaningful. **Step:** Analyze cues.

BOW-TIE · PRIORITIZE HYPOTHESES + TAKE ACTION

Question 3

Complete the bow-tie: For the client in Question 2 (suspected chorioamnionitis), identify the **condition**, the **two highest-priority actions**, and the **two parameters to monitor**.

ACTIONS TO TAKE

1. Initiate broad-spectrum IV antibiotics (e.g., ampicillin + gentamicin) per order
2. Notify provider and prepare for expedited delivery

CONDITION MOST LIKELY

Chorioamnionitis (Intra-amniotic infection)

PARAMETERS TO MONITOR

1. Maternal temperature, HR, BP every 15–30 min and FHR continuously
2. Trend WBC, lactate, fetal tracing category

Why this is the answer: The combination of fever + fetal tachycardia + foul fluid + uterine tenderness defines intra-amniotic infection. Empiric IV antibiotics + expedited birth are evidence-based. Monitoring parameters track maternal sepsis progression and fetal status. **Trap:** Choosing "send blood cultures and wait" — antibiotics are not delayed for results. **Steps:** Prioritize + Take Action.

DROP-DOWN / CLOZE · GENERATE SOLUTIONS

Question 4

A GBS-positive client arrives in active labor at 5 cm dilation. The nurse should administer *[1]* first, with the goal of completing the dose at least *[2]* hours before birth, because inadequate prophylaxis increases the newborn's risk of *[3]*.

[1] IV penicillin G | **[2]** 4 hours | **[3]** early-onset GBS sepsis (with pneumonia and/or meningitis).

Trap: selecting oral amoxicillin (not used for intrapartum prophylaxis) or "2 hours." **Step:** Generate solutions.

MATRIX · GENERATE SOLUTIONS

Question 5

For each laboring client, indicate whether the nurse should anticipate a **vaginal birth** or **cesarean birth**.

CLINICAL SCENARIO	VAGINAL	CESAREAN
HIV-positive, viral load 200 copies/mL, on suppressive ART, term, no other indications	✓	
HIV-positive, viral load 12,000 copies/mL at 36 weeks, no labor yet		✓
Active HSV vulvar lesion at labor onset		✓
Recurrent HSV history, suppressive acyclovir from 36 wk, no lesions or prodrome at labor onset	✓	
HBsAg-positive mother, normal labor course	✓	
GBS-positive on adequate IV penicillin	✓	

Key reasoning: Hepatitis B and GBS do not change route of birth. HSV requires cesarean only when active lesions or prodrome are present. HIV depends on viral load: > 1,000 copies/mL → scheduled cesarean before labor/ROM. **Step:** Generate solutions.

ORDERED RESPONSE · TAKE ACTION

Question 6

A 38-week client with GBS-positive screen and ROM × 20 hours develops a temperature of 38.6°C. Fetal HR is 178 bpm with minimal variability. Place the nurse's actions in priority order.

1. Notify the provider
2. Reposition client to left lateral and increase IV fluids per order
3. Verify continuous FHR monitor placement and recheck temperature
4. Administer ordered IV broad-spectrum antibiotics
5. Document findings, plan, and infant nursery notification

Correct order: 3 → 2 → 1 → 4 → 5. Verify monitoring and reassess to confirm a real, persistent finding. Begin intrauterine resuscitation (position, fluids). Notify the provider to get antibiotics ordered if not already. Administer antibiotics promptly — every hour of delay increases neonatal risk. Document and notify nursery for high-risk newborn handoff.

Trap: putting "notify provider" first — quick verification and resuscitation come first because they are within independent scope and prevent fetal compromise. **Step:** Take action.

MULTIPLE CHOICE · MEDICATION SAFETY

Question 7

A laboring client with GBS-positive screen reports an allergy to penicillin that caused "throat closing and trouble breathing" years ago. There is no antibiotic susceptibility result available. Which medication does the nurse anticipate?

A. Cefazolin IV

B. Clindamycin IV

C. Vancomycin IV

D. Amoxicillin PO

Correct: C. Severe (anaphylactic) penicillin allergy requires **vancomycin** when clindamycin susceptibility is unknown or absent.

A. Cefazolin is only acceptable for *mild* reactions (rash without anaphylaxis). B. Clindamycin is acceptable only with confirmed susceptibility. D. Oral amoxicillin is not used for intrapartum prophylaxis. **Trap:** defaulting to cefazolin without checking severity of allergy. **Step:** Generate solutions.

FETAL MONITORING STRIP · ANALYZE CUES

Question 8

The nurse reviews a fetal monitor strip on a febrile laboring client. Baseline FHR is 170 bpm, variability is minimal, no accelerations are noted, and there are recurrent late decelerations with each of the last four contractions. Maternal T 38.5°C, HR 122. Which Category and which immediate action are correct?

A. Category I — continue monitoring

B. Category II — reposition only

C. Category III — intrauterine resuscitation and prepare for delivery

D. Category I — administer antipyretic and recheck

Correct: C. Absent/minimal variability with recurrent late decelerations is Category III — abnormal — requiring **intrauterine resuscitation (lateral position, IV bolus per order, stop oxytocin if running) and preparation for expedited delivery** while antibiotics are continued.

A & D. Category I requires moderate variability and no recurrent decelerations. B. Repositioning alone is insufficient for Category III. **Trap:** calling tachycardia + late decelerations Category II — when variability is minimal/absent with recurrent lates, it becomes Category III. **Step:** Analyze + Take Action.

PRIORITIZATION · RECOGNIZE + PRIORITIZE

Question 9

The nurse is caring for four laboring clients. Which client should the nurse assess *first*?

A. GBS-positive client, 6 cm, completed IV penicillin 3 hours ago, FHR 140 with moderate variability

B. HIV-positive client, viral load undetectable, in early labor, intact membranes

C. HBsAg-positive client, in active labor, FHR reassuring

D. Client with ROM × 14 hours, temperature 38.7°C, fetal HR 175 with minimal variability

Correct: D. Active chorioamnionitis with concerning fetal tracing is the most unstable client — the nurse goes there *first*.

A. Adequately prophylaxed, reassuring tracing. B. Stable, intact membranes — no acute compromise. C. Plan is in place; not an acute issue. **Trap:** picking the most "interesting" diagnosis (HIV) over the most acute. **Step:** Prioritize hypotheses.

MULTIPLE CHOICE · TAKE ACTION (NEWBORN)

Question 10

A newborn is delivered vaginally to an HBsAg-positive mother. Which set of nursing actions is correct?

A. Administer hepatitis B vaccine only; HBIG is given if infant develops symptoms

B. Administer HBIG and hepatitis B vaccine at two different sites within 12 hours of birth

C. Defer all immunizations until 6 weeks of age

D. Administer HBIG IV and hepatitis B vaccine PO

Correct: B. HBIG + hep B vaccine within 12 hours of birth at two different sites reduces transmission to under 5%.

A. Vaccine alone is for HBsAg-negative mothers. C. Delay = lost window. D. Both are IM. **Trap:** giving vaccine only. **Step:** Take action.

CASE-STYLE MULTIPLE CHOICE · EVALUATE OUTCOMES

Question 11

Six hours after IV antibiotics for chorioamnionitis, the nurse notes: T 37.4°C (down from 38.6°C), maternal HR 90 (was 122), FHR baseline 145 with moderate variability and accelerations. Which statement best evaluates the outcome?

A. The infection is unchanged; broaden antibiotics

B. The client is responding to therapy; continue current treatment and monitoring

C. Discontinue antibiotics — the temperature is normal

D. Increase oxytocin to expedite delivery

Correct: B. Defervescence, normalization of maternal HR, and reassuring fetal tracing indicate response. Continue antibiotics and ongoing monitoring; **do not stop antibiotics** just because temp normalized — protocols continue until afebrile for a specified period postpartum per institution.

A. No evidence of worsening. C. Premature discontinuation. D. Oxytocin is titrated based on contraction pattern and tracing, not stopped/started to chase infection labels. **Step:** Evaluate outcomes.

SATA · TAKE ACTION (HIV)

Question 12

An HIV-positive laboring client at 39 weeks is having a vaginal birth (viral load 180 copies/mL, on ART). Which actions should the nurse take? **Select all that apply.**

A. Administer IV zidovudine intrapartum per order

B. Apply an internal fetal scalp electrode to optimize tracing

C. Avoid artificial rupture of membranes when possible

D. Limit vaginal exams

E. Prepare to suction the newborn aggressively to clear blood

F. Wear standard precautions PPE for blood/body fluid contact

Correct: A, C, D, F. IV ZDV is given when viral load is detectable per protocol; AROM and invasive monitors are avoided to limit transmission; standard precautions apply.

B. Internal monitors break fetal scalp skin = increased transmission. E. Aggressive suction is avoided unless airway is obstructed — vigorous suction increases mucosal trauma. **Trap:** picking “aggressive suction” because it sounds protective. **Step:** Take action.

DROP-DOWN · GENERATE SOLUTIONS (HSV)

Question 13

A client at 38 weeks with a history of recurrent genital HSV reports tingling and burning at the vulva for the past hour. She is in early labor. The nurse should anticipate *[1]* and educate the client that *[2]*.

> **[1]** Cesarean birth (prodrome = viral shedding risk). | **[2]** Vaginal birth is unsafe when prodromal symptoms or lesions are present at labor onset because of the risk of severe neonatal HSV (skin/eye/mouth, CNS, or disseminated disease).
>
> **Trap:** assuming suppressive acyclovir makes vaginal birth automatically safe. **Step:** Generate solutions.

EMERGENCY ACTION · TAKE ACTION

Question 14

A client with chorioamnionitis becomes hypotensive (BP 78/40), HR 138, RR 26, oxygen saturation 91% on room air, with mottled extremities. Which action is the nurse's priority?

A. Administer ordered antipyretic

B. Activate the rapid response/sepsis team and prepare for fluid resuscitation

C. Repeat the blood pressure in 30 minutes

D. Place the client in semi-Fowler position

> **Correct: B.** This is **maternal septic shock**. Activate rapid response/sepsis pathway, anticipate IV crystalloid bolus, vasopressors, broad-spectrum antibiotics if not already given, and expedited delivery.
>
> A. Antipyretic alone is inadequate. C. Delay is dangerous. D. Position lateral, not semi-Fowler, in late pregnancy to avoid aortocaval compression. **Trap:** treating fever instead of perfusion. **Step:** Take action.

MULTI-SELECT · EVALUATE (NEWBORN OUTCOMES)

Question 15

Which newborn findings would alert the nurse that a baby born to a mother with chorioamnionitis may have early-onset sepsis? **Select all that apply.**

A. Temperature instability (low or high)

B. Respiratory rate 38, regular, with mild acrocyanosis

C. Grunting, nasal flaring, retractions

D. Poor feeding and lethargy

E. Apgar 9 at 1 min and 9 at 5 min

F. Glucose 28 mg/dL

> **Correct: A, C, D, F.** Temperature instability, respiratory distress, lethargy/poor feeding, and hypoglycemia are sepsis cues in the newborn.

B. Normal newborn respiratory pattern with mild acrocyanosis is expected. E. Reassuring Apgars are normal.
Step: Evaluate outcomes.

08 Unfolding NGN Case Study

Maya, G2P1 at 38^{+5} weeks

VITAL SIGNS (1400)

BP 118/72 · HR 102 · RR 20 · T 37.6°C (99.7°F) · SpO_2 99%

FETAL TRACING

Baseline 158 bpm · moderate variability · occasional accelerations · no decelerations

CONTRACTIONS

q 3–4 min, 60 s, moderate; resting tone soft

CERVIX

5 cm / 90% / 0 station · membranes ruptured spontaneously 14 h ago, clear fluid

PRENATAL

GBS: positive · HIV: negative · HBsAg: negative · HSV: none · A&O · NKA

MAR (LAST 24 H)

Penicillin G 5 million units IV at 1100 · acetaminophen 650 mg PO PRN · LR @ 125 mL/hr

```
1400 — Client requests change of position; reports increased back pressure. Continues IV penicillin per protocol. FHR baseline 158, moderate variability, contractions q 3–4 min. T 37.6°C. Plan: continue support, reassess in 1 hour.
```

RECOGNIZE CUES — AT 1500

Maya now has T 38.5°C, HR 118, BP 108/62, FHR baseline 175 with minimal variability, no accelerations, and a foul-smelling vaginal discharge noted on perineal pad. She reports the contractions feel "different — like my belly is sore even between them."

WHICH FINDINGS REQUIRE IMMEDIATE FOLLOW-UP? (SELECT ALL THAT APPLY)

- ✓ Maternal temperature 38.5°C
- ✓ Fetal heart rate 175 with minimal variability
- ✓ Foul-smelling vaginal discharge
- ✓ Uterine tenderness between contractions
- ✗ Maternal BP 108/62 (within normal limits)

ANALYZE CUES

The cluster — fever + fetal tachycardia + minimal variability + foul fluid + uterine tenderness — is classic for **chorioamnionitis (intra-amniotic infection)**. ROM > 14 hours is consistent with ascending infection. GBS-positive status raises the stakes for the newborn.

PRIORITIZE HYPOTHESES

1. **Most likely:** Chorioamnionitis with developing Category II tracing.
2. **Differential to rule out:** Placental abruption (would expect bleeding, increased resting tone, pain), maternal dehydration (would expect tachycardia but not foul fluid).

GENERATE SOLUTIONS

- Initiate broad-spectrum IV antibiotics (ampicillin + gentamicin per order).

- Intrauterine resuscitation: left lateral position, IV fluid bolus per order, treat fever with acetaminophen, oxygen only if SpO_2 drops or per facility policy.
- Notify provider; anticipate expedited delivery (continued labor or operative delivery depending on progression and tracing).
- Continue penicillin GBS prophylaxis; record exact dose times for newborn handoff.
- Notify the nursery/NICU of suspected chorioamnionitis and GBS exposure.

TAKE ACTION — ORDER SET

ORDER	ANTICIPATED / CONTRAINDICATED / ESSENTIAL	WHY
Ampicillin 2 g IV q 6 h	**Essential**	Empiric broad-spectrum coverage for polymicrobial chorioamnionitis
Gentamicin IV per protocol	**Essential**	Adds gram-negative coverage
Acetaminophen 650 mg PO	**Anticipated**	Treats fever, helps reduce fetal tachycardia
Discontinue all IV fluids	**Contraindicated**	Volume support is needed; do not stop maintenance
Increase oxytocin to 30 mU/min	**Contraindicated**	With Category II tracing and tachysystole risk, do not push oxytocin; titrate to safe tracing only
Notify nursery/NICU	**Essential**	Newborn requires immediate evaluation for early-onset sepsis
STAT CBC, lactate, blood cultures × 2	**Anticipated**	Track infection severity; do not delay antibiotics for results

EVALUATE OUTCOMES — TWO HOURS AFTER ANTIBIOTICS

T 37.6°C, HR 96, BP 116/70. FHR baseline 152 with moderate variability and present accelerations. Foul odor decreased. Maya delivers a viable infant vaginally at 1830. Apgars 8/9.

> OUTCOME INTERPRETATION
>
> Maternal and fetal parameters are responding to treatment. Plan: continue postpartum antibiotics until afebrile per protocol; communicate intrapartum infection clearly at newborn handoff; monitor newborn for early-onset sepsis (temperature instability, respiratory distress, poor feeding, glucose).

09 “What Should the Nurse Do First?” — 5 Mini-Scenarios

SCENARIO 1

A laboring client with ROM × 8 hours suddenly reports she “feels something between her legs.” FHR drops to 80 bpm.

First action: Reposition immediately (knee-chest or Trendelenburg) and apply firm digital pressure to elevate the presenting part off the cord — this is umbilical cord prolapse, not infection, and is more acute than any infection. Then call for help.

SCENARIO 2

A GBS-positive client in active labor has received only one dose of IV penicillin 1 hour ago. She is now 9 cm with the urge to push.

First action: Document the exact time of the last dose, notify the provider and nursery — the prophylaxis will be inadequate (< 4 hours). Proceed with safe birth; the newborn will need extended observation per protocol.

SCENARIO 3

A client with HIV (viral load detectable) arrives in labor at 39 weeks. Membranes are intact. Cesarean is planned.

First action: Initiate IV zidovudine per protocol immediately, before any AROM or invasive procedures; notify the OR team for expedited cesarean.

SCENARIO 4

A newborn delivered 5 minutes ago to an HBsAg-positive mother is stable, vital signs normal.

First action: Confirm orders for both HBIG *and* hep B vaccine within 12 hours of birth; plan administration at two different sites. Bath after temperature stable and per facility protocol (often before vaccine administration to remove infectious blood/secretions).

SCENARIO 5

A laboring client with intact membranes spikes a fever of 38.9°C with FHR baseline jumping from 145 to 175.

First action: Recheck temp and FHR (validate the finding), reposition, give acetaminophen and IV fluids per order, notify provider, anticipate antibiotic orders. Continuous fetal monitoring throughout.

10 Stop, Hold, or Escalate

STOP OXYTOCIN

Client on oxytocin with chorioamnionitis develops a Category III tracing (recurrent late decels + minimal variability + tachycardia). **Pause oxytocin**, lateral position, IV bolus per order, continue antibiotics, prepare for delivery.

HOLD THE MEDICATION

Hold cefazolin (planned for GBS prophylaxis) if the client reveals a previously unreported severe penicillin reaction (anaphylaxis). Notify provider for alternative (vancomycin if clindamycin susceptibility unknown).

NOTIFY PROVIDER

HIV-positive client at 39 weeks scheduled for cesarean experiences ROM at home and arrives 4 hours later — notify provider STAT, every additional hour of ROM increases transmission risk. Prepare for immediate cesarean and continue IV ZDV.

RAPID RESPONSE / SEPSIS TEAM

Postpartum client treated for chorioamnionitis becomes lethargic, BP 82/44, HR 132, lactate 4.5, oliguric. Activate the maternal sepsis response — escalate immediately, ensure broad-spectrum antibiotics given, fluid resuscitate, anticipate ICU consult.

PREPARE FOR EMERGENCY BIRTH

Client at 35 weeks with HSV prodrome (tingling, burning) and rapidly progressing labor — notify provider and anesthesia, prepare for cesarean. Avoid vaginal exams. Communicate the urgency clearly to the team.

11 5 Common NCLEX Traps

01 **Confusing GBS-positive with HIV-positive precautions.** GBS = treat in labor with IV penicillin; vaginal birth fine. HIV = consider viral load, may need cesarean, avoid invasive monitors, give IV ZDV. They are not interchangeable.

02 **Forgetting that FHR is the priority assessment after ROM** — students often jump to fluid color or maternal temperature. Cord prolapse first, infection second.

03 **Giving cefazolin to a client with anaphylactic penicillin allergy.** Cefazolin is fine for mild rashes only — severe = vancomycin (or clindamycin only if susceptibility confirmed).

04 **Treating a fever in labor as just dehydration.** A temperature ≥ 38°C with fetal tachycardia is chorioamnionitis until proven otherwise — antibiotics begin immediately, not after cultures result.

05 **Skipping HBIG for a newborn whose mother is HBsAg-positive.** Both HBIG AND vaccine are needed within 12 hours of birth. Vaccine alone is for HBsAg-negative mothers.

12 End-of-Day Quick Review

10 MUST-REMEMBER POINTS

1. GBS-positive → IV penicillin G ≥ 4 hours before birth.
2. Severe PCN allergy → vancomycin (or clindamycin only with susceptibility).
3. Maternal fever ≥ 38°C + fetal tachy > 160 = chorioamnionitis until proven otherwise.
4. Chorioamnionitis treatment = IV ampicillin + gentamicin + expedite delivery (do not delay).
5. ROM > 18 h = increased infection risk; monitor temp q 2 h.
6. HIV with viral load > 1,000 copies/mL → scheduled cesarean at 38 weeks before labor/ROM.
7. HIV intrapartum = IV ZDV until cord clamped; avoid AROM, fetal scalp electrode, scalp sampling, vacuum/forceps.
8. Active HSV lesion or prodrome at labor onset = cesarean birth.
9. HBsAg-positive mother → newborn gets HBIG + hep B vaccine within 12 h at two sites.
10. Every newborn: erythromycin eye ointment + IM vitamin K within 1 h; first bath after temp stable.

5 RED-FLAG FINDINGS

- Maternal T ≥ 38°C in labor
- Foul-smelling amniotic fluid
- FHR > 160 sustained > 10 min
- Uterine tenderness between contractions
- Active HSV lesion or prodrome at labor onset

5 "NEVER DO THIS" RULES

- Never delay antibiotics for chorioamnionitis "until cultures result."
- Never give cefazolin to a client with anaphylactic penicillin allergy.
- Never apply an internal fetal scalp electrode on an HIV-positive client.
- Never do a vaginal exam on a client with active HSV lesions unless absolutely necessary.
- Never skip HBIG for the newborn of an HBsAg-positive mother.

5 FETAL MONITORING CLUES

- Rising baseline → first fetal sign of chorioamnionitis (often before fever).
- Tachycardia + moderate variability = still Category II (treatable).
- Tachycardia + minimal variability + recurrent late decels = Category III (act fast).
- Variables after ROM = check for cord prolapse first.
- Always reassess Category after each intervention.

5 MEDICATION SAFETY CLUES

- Penicillin G — document time precisely (4-hour rule).
- Vancomycin — slow IV infusion to avoid red-man syndrome.
- Gentamicin — monitor renal function and hearing.
- IV ZDV — never stop until cord clamping, even during cesarean.

- HBIG + hep B vaccine — different sites, within 12 hours.

13

Day 13 Infographic Summary

Screenshot this section for study. Every infection in labor reduces to: **recognize → time the antibiotic → choose the safe route → protect the newborn.**

GBS PROPHYLAXIS

- **Positive screen** 35–37 wk → IV penicillin G in labor
- **Goal:** first dose ≥ **4 h** before birth
- **PCN mild allergy** → cefazolin
- **PCN severe allergy** → clindamycin (if susceptible) OR vancomycin
- **Unknown GBS + ROM > 18 h** → treat as positive

CHORIOAMNIONITIS

- Fever ≥ 38°C + ≥ 1 of: FHR > 160 · uterine tenderness · foul fluid · maternal HR > 100 · WBC > 15K
- **Treat now:** ampicillin + gentamicin IV
- **Expedite delivery** — infection is not a reason to slow labor
- Notify nursery for newborn sepsis workup

HIV IN LABOR

- **VL > 1,000** → scheduled C-section 38 wk, before labor/ROM
- **VL ≤ 1,000 on ART** → vaginal birth OK
- **IV ZDV** until cord clamping
- **Avoid:** AROM · scalp electrode · scalp sampling · vacuum/forceps · routine episiotomy
- Infant ART + formula (US guidance)

HSV IN LABOR

- **Active lesion OR prodrome** at labor onset → cesarean
- **No lesions, no prodrome** → vaginal birth OK
- Suppressive **acyclovir** from 36 wk for recurrent disease
- Avoid invasive monitors, scalp sampling
- Neonatal HSV may be fatal — don't miss prodrome

HEPATITIS B

- Mother HBsAg+ → newborn gets **HBIG + Hep B vaccine** within **12 h**, two sites
- Mother HBsAg− → Hep B vaccine alone
- Route of birth NOT changed by hepatitis B
- **Breastfeeding is safe**
- Series continues at 1–2 mo and 6 mo

NEWBORN PROTECTION

- **Erythromycin eye ointment** — gonorrhea/chlamydia (universal)
- **Vitamin K IM** vastus lateralis — prevents VKDB
- **First bath delayed** until temp stable; per protocol for HBV/HIV exposure
- Monitor temp, respirations, feeding, glucose for sepsis cues

AFTER ROM — PRIORITIES

- **1. FHR first** (cord prolapse)
- **2. Color/odor** of fluid (meconium, infection)
- **3. Maternal temp** q 2 h
- Document time of ROM precisely
- ROM > 18 h → infection risk ↑↑

FETAL MONITORING IN INFECTION

- Rising baseline = earliest fetal sign
- Tachy + moderate variability → Cat II
- Tachy + minimal variability + late decels → **Cat III**
- Intrauterine resuscitation: lateral position · IV bolus · stop oxytocin · O_2 only if indicated

RED-FLAG TRIAD

- **Fever** ≥ 38°C
- **Fetal tachycardia** > 160
- **Foul fluid** or uterine tenderness
- → Empiric antibiotics + expedite birth + notify nursery

NEVER-DO RULES

- Never wait for cultures before antibiotics in suspected chorio
- Never give cefazolin if anaphylactic PCN allergy
- Never apply scalp electrode in HIV+ client
- Never skip HBIG for HBsAg+ mother's baby
- Never assume suppressive acyclovir = safe vaginal birth (check for prodrome!)

End of Day 13 · Next: Day 14 — Cesarean Birth, Operative Vaginal Birth, Pre-op & Post-op Priorities