NCLEX · MATERNAL NEWBORN · 2026 TEST PLAN

# Postpartum *Hemorrhage*

*The leading cause of maternal mortality worldwide — a true obstetric emergency where seconds matter and clinical judgment saves lives.*

| SYSTEM | CATEGORY | PRIORITY | THRESHOLD |
|---|---|---|---|
| Obstetrics | Emergency | ABC · Safety | ≥ 1,000 mL |

## 01 OVERVIEW What is postpartum hemorrhage?

01 / DEFINITION

Cumulative blood loss of **≥ 1,000 mL** *OR* blood loss with signs/symptoms of hypovolemia within **24 hours of birth**, regardless of route.

02 / TIMING

**Early (primary):** within 24 hrs — most common. **Late (secondary):** 24 hrs to 12 weeks postpartum.

03 / WHY IT MATTERS

PPH is the **#1 cause of maternal mortality worldwide**. Fast recognition + rapid intervention = survival. Every postpartum assessment is a hemorrhage screen.

02 MECHANISM

# The pathophysiology, step by step.

After delivery → placenta detaches → leaves **open spiral arteries** at placental site

↓

Normally → uterus contracts → **compresses vessels** → bleeding stops

↓

In PPH → **one of the "4 Ts" fails** → vessels stay open → hemorrhage

↓

Rapid blood loss → **hypovolemic shock** → organ failure → death if untreated

T

70–80% · #1 CAUSE

## Tone

**Uterine atony.** The uterus fails to contract after delivery. Boggy, soft, relaxed. Risk: prolonged labor, overdistension (twins, macrosomia, polyhydramnios), grand multiparity, Pitocin augmentation.

T

~20%

## Trauma

Lacerations (vaginal, cervical, perineal), hematoma, uterine rupture or inversion. Suspect when uterus is **firm** but bleeding is heavy and bright red.

T

~10%

## Tissue

Retained placental fragments. Prevents the uterus from contracting fully. Common cause of **late PPH**. Inspect placenta at delivery — must be intact.

T

<1%

## Thrombin

Coagulation disorders — DIC, ITP, von Willebrand disease, HELLP syndrome, abruption, amniotic fluid embolism. Bleeding from IV sites, gums = think coag issue.

03 ASSESSMENT

# Signs & symptoms — catch it early.

STAGE ONE

## Early · Compensated

- **Boggy uterus** — soft, won't stay contracted
- Fundus **above** the umbilicus
- Fundus displaced from midline (often right → full bladder)
- Saturating a peri-pad in < 1 hour
- Passage of large clots (> golf ball)
- Heavy bright-red lochia
- Mild anxiety, slight tachycardia

STAGE TWO · RED FLAGS

## Late · Decompensated

- **Tachycardia > 110** — first sign of shock
- **Hypotension** — late, ominous sign
- Tachypnea, air hunger
- Cool, clammy, pale skin
- Oliguria (< 30 mL/hr)
- Altered mental status, restlessness
- Delayed capillary refill (> 3 sec)

REMEMBER

*Blood pressure drops last. A young, healthy postpartum patient compensates for a long time — by the time BP falls, she is critically ill.*

## 04 CLINICAL JUDGMENT
# Priority nursing interventions.

*Prioritize **ABCs** and **safety**. For suspected atony, **fundal massage is the first action** — then empty bladder, give uterotonics, call for help.*

01 **MASSAGE the fundus** firmly with cupped hand — support lower uterine segment. First action for atony.

02 **ASSESS** fundus — tone (firm vs boggy), height (U/umbilicus), position (midline vs displaced).

03 **EMPTY the bladder** — full bladder displaces uterus and mimics atony. Straight cath if unable to void.

04 **QUANTIFY** blood loss — weigh pads and chux (**1 g = 1 mL**). Visual estimates are inaccurate.

05 **VITAL SIGNS** q5–15 min — watch for tachycardia, tachypnea, ↓ $SpO_2$.

06 **OXYGEN** 10 L/min via non-rebreather to maximize tissue perfusion.

07 **IV ACCESS** — two large-bore (16–18 g); infuse isotonic fluids (NS, LR) per order.

08 **ADMINISTER** uterotonics per protocol — Oxytocin → Methergine → Hemabate → Misoprostol → TXA.

09 **LABS** — type & crossmatch, CBC, coags, fibrinogen. Prepare for possible transfusion.

10 **FOLEY** catheter with urometer — strict I&O; goal ≥ 30 mL/hr.

11 **POSITION** — flat with legs elevated (modified Trendelenburg) to promote venous return.

12 **NOTIFY** provider / rapid response immediately; document everything; offer emotional support.

*ABCs* Airway, Breathing, Circulation — always. Massage and $O_2$ come *before* charting. Call for help early. Never leave the patient alone.

MEDICATIONS

# 05 Uterotonics & antifibrinolytics.

## Oxytocin *(Pitocin)*

FIRST LINE

**CLASS**

Synthetic posterior pituitary hormone · Uterotonic

**MECHANISM**

Stimulates uterine smooth-muscle contraction → compresses placental-site vessels.

**SIDE EFFECTS**

Water intoxication (antidiuretic effect), hypotension with rapid IV push, N/V.

**NURSING**

**Never** IV push undiluted. Dilute in IV fluids. Monitor BP, fundus, urine output.

## Methylergonovine *(Methergine)*

⚠ CHECK BP FIRST

**CLASS**

Ergot alkaloid · Uterotonic

**MECHANISM**

Direct smooth-muscle stimulation → sustained uterine contraction.

**CONTRAINDICATION**

**HYPERTENSION**, pre-eclampsia, cardiac disease. Causes severe vasoconstriction.

**NURSING**

**Check BP before every dose.** Hold if SBP > 140 or DBP > 90. Usually given IM.

## Carboprost *(Hemabate)*

⚠ NOT FOR ASTHMA

**CLASS**

Prostaglandin F2α · Uterotonic

**MECHANISM**

Stimulates myometrial contractions via prostaglandin receptors.

**CONTRAINDICATION**

**ASTHMA** — causes bronchospasm. Also caution in cardiac/renal/hepatic disease.

**NURSING**

Given deep IM. Side effects: **diarrhea, N/V, fever, chills**. Anti-emetics / anti-diarrheals often pre-given.

## Misoprostol *(Cytotec)*

RECTAL / SL

| CLASS | MECHANISM |
|---|---|
| Prostaglandin E1 analog · Uterotonic | Promotes uterine contraction; also ripens cervix in other contexts. |
| **SIDE EFFECTS** | **NURSING** |
| Fever, chills, shivering, diarrhea, headache. | For PPH, given **rectally or sublingually**. Useful when other uterotonics are contraindicated. |

## Tranexamic Acid *(TXA)*

WITHIN 3 HRS

| CLASS | MECHANISM |
|---|---|
| Antifibrinolytic | Inhibits plasminogen activation → stabilizes existing clots (does *not* cause uterine contraction). |
| **SIDE EFFECTS** | **NURSING** |
| Thromboembolic risk, visual changes, dizziness. | Most effective when given **within 3 hours** of bleeding onset. IV infusion — monitor for clots. |

NCLEX TEST TRAPS

# 06 Where students lose the point.

i

COMMON MISTAKE · SHOCK

Hypotension is **not** the first sign of shock. **Tachycardia is** — and tachypnea often comes next. Waiting for a blood-pressure drop is waiting too long.

ii

COMMON MISTAKE · FUNDUS

If the fundus is **displaced to the right**, the problem is usually a **full bladder** — not atony. Empty the bladder first before assuming uterotonics are needed.

iii

COMMON MISTAKE · ATONY

For suspected atony, **fundal massage comes before medications**. Mechanical stimulation is the first-line intervention — meds follow if it doesn't work.

*iv* COMMON MISTAKE · METHERGINE

**Never give Methergine** to a patient with hypertension or pre-eclampsia. Always check BP before administration — hold for SBP > 140.

*v* COMMON MISTAKE · HEMABATE

**Never give Hemabate** to an asthmatic patient — it causes bronchospasm. Review med history before administration.

*vi* COMMON MISTAKE · FIRM FUNDUS

A **firm fundus with continued heavy bleeding** points to trauma or a laceration — not atony. Notify the provider for inspection/repair.

*vii* COMMON MISTAKE · BLOOD LOSS

Visual estimates underestimate blood loss by up to 50%. **Weigh pads and chux**: 1 gram = 1 mL. This is the correct NCLEX answer.

*viii* COMMON MISTAKE · LATE PPH

Bleeding that starts **days to weeks after discharge** is often **retained placental tissue** — not normal lochia. Teach patients when to call.

## 07 DISCHARGE TEACHING
# What the patient needs to know.

### Self-care at home

- ✓ Empty bladder every 2–3 hours to prevent uterine displacement.
- ✓ Eat iron-rich foods (lean red meat, spinach, beans, fortified cereals).
- ✓ Take prescribed iron supplements with vitamin C for absorption.
- ✓ Rest; gradually increase activity. No heavy lifting for 6 weeks.
- ✓ Expect lochia color change: rubra → serosa → alba (see below).
- ✓ Keep all postpartum follow-up appointments.

### Call 911 / provider if

- ! Soaking a peri-pad in less than 1 hour.
- ! Passing clots larger than a golf ball.
- ! Dizziness, lightheadedness, fainting.
- ! Rapid heartbeat, weakness, pale or clammy skin.
- ! Foul-smelling lochia or return to bright-red bleeding after it had lightened.
- ! Fever > 100.4°F (38°C) or chills.
- ! Pelvic or abdominal pain not relieved by medication.

✓ Stay hydrated; continue prenatal vitamins.

| DAYS 1 – 3 | DAYS 4 – 10 | DAYS 11 – 6 WEEKS |
|---|---|---|
| *Rubra* | *Serosa* | *Alba* |
| Dark red · small clots ok | Pink-brown · watery | Yellow-white · minimal |

## 08 MEMORY BOOSTERS
# Mnemonics to lock it in.

THE BIG ONE

# The *4 T's* of PPH — Tone, Trauma, Tissue, Thrombin.

Every case fits one of these. Start with Tone (most common), move down the list if the uterus is firm.

FUNDUS CHECK

## *Boggy = Bleeding.*

Firm fundus → good. Boggy fundus → massage now. Simple and fast.

DRUG ORDER

## Oh My, How Much *TXA?*

**O**xytocin → **M**ethergine → **H**emabate → **M**isoprostol → **TXA**

CONTRAINDICATIONS

## *M*ethergine + HTN = NO.
## *H*emabate + Asthma = NO.

M for *MAP too high.* H for *Huff-and-wheeze.* The two most-tested med traps in OB pharmacology.

SHOCK TIMELINE

## Tachy → Tachypnea → Oliguria → *Hypotension last.*

BP drops last — don't wait for it. Young, healthy postpartum patients compensate well until they crash.

QUICK ASSESSMENT

## Check *U · P · T*

**U**terus (tone), **P**ad (saturation), **T**oilet (bladder). Your three-point scan for every postpartum round.

BLOOD LOSS MATH

## *1 gram = 1 mL.*

Weigh the pad. Subtract the dry weight. That number in grams equals milliliters of blood lost. Quantify — never estimate.

*Study smart. Pass the NCLEX.*

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