

Day 4 — Safe Birth, Safe Start

Case simulation cards — facilitator pack (3 scenarios)

How to run these simulations

- Each scenario runs 12–15 minutes plus a 10-minute debrief. These scenarios involve TWO potential patients — assign a team member to the newborn role explicitly.
- Use an obstetric model or pelvis trainer for PPH (a manikin with a 'boggy uterus' pillow works), and a newborn manikin for resuscitation.
- Prepare props: mock oxytocin, TXA, MgSO₄ with dilution card, calcium gluconate, blood-soaked pads of known weight for loss estimation, newborn BVM and towels.
- Drug volumes and dilutions must be verbalised and cross-checked against the printed protocol card before 'giving'.
- One observer completes the Day 4 Audit Tool; time PPH drug intervals and the newborn's 'golden minute' with a stopwatch.
- Include the husband/family actor where staffing allows — communication under pressure is scored.

Standard debrief structure (after every case)

- **Reactions** — one word from each participant on how it felt.
- **Description** — what was the case? Confirm the clinical facts.
- **Analysis** — what went well, what would we do differently? Use the audit checklist findings.
- **Summary** — each participant states one thing they will do differently in a real emergency.

Case 1: Postpartum Haemorrhage After a Precipitous Birth

4 Ts • uterotonics + TXA • bimanual compression • two-patient management

Scenario brief — read aloud to the team

A 29-year-old woman (G3P3) delivered a healthy baby boy in your treatment room 15 minutes ago — she arrived fully dilated and there was no time for transfer. The placenta delivered 5 minutes ago and looked complete. The midwife-trained nurse calls you urgently: the bleeding is not stopping. The baby is wrapped and stable with an assistant.

Setting, roles & equipment

Location	Treatment room, post-delivery.
Participants	Doctor, 2 nurses (one holds the newborn role); mother is an actor or manikin with simulated bleeding.
Equipment	Obstetric model/pelvis trainer, mock oxytocin 10 IU, TXA 1 g, IV fluid setup ×2, urinary catheter, weighed 'soaked' pads (total 900 mL), warm blankets.
Facilitator controls	Bleeding continues until: fundal massage + oxytocin + bladder emptied + bimanual compression all performed. Release vitals per stage. If treated correctly by 10 min, bleeding slows; transfer still mandatory.

Initial patient status

Stage	Blood loss	HR	BP	RR	Other
Call for help	~600 mL and ongoing	108	112/70	20	Uterus soft/boggy above umbilicus; anxious; shivering
+5 min untreated	~1100 mL	126	104/62	24	Pale, thirsty, cap refill 3 s, no urine since birth
If managed	Slowing	112	108/66	22	Uterus firming with massage + drugs

Facilitator progression — how the case unfolds

Stage / trigger	Patient state	Expected team response
0–2 min	Boggy uterus, steady trickle + clots	PPH declared aloud; help called; roles assigned (leader, drugs, newborn watcher); losses weighed not guessed
2–5 min	Bleeding continues	Fundal massage; oxytocin 10 IU IM; two large-bore IVs; bloods; crystalloid bolus; TXA 1 g IV
5–8 min	Persistent atony	Bladder catheterised; placenta re-inspected for completeness; perineum inspected for trauma under light
8–12 min	Still oozing	Bimanual uterine compression started and MAINTAINED; second uterotonic per protocol; warm blankets

12–15 min	Slowing if managed	Transfer activated (do not wait for collapse); compression continues en route plan; two-patient SBAR (mother AND baby)
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Expected critical actions — observer ticks each

- PPH recognised and declared before 1000 mL — based on weighed loss and boggy uterus
- Help called and roles assigned including a dedicated person for the newborn
- Fundal massage started immediately and technique correct
- Oxytocin 10 IU IM given within 5 minutes; TXA 1 g IV within the first 10 minutes
- Two large-bore IV lines + fluid bolus; blood loss quantified by weighing
- Bladder emptied by catheter and reason verbalised
- 4 Ts systematically verbalised (tone, tissue, trauma, thrombin) with placenta and perineum checked
- Bimanual compression performed correctly and held during ongoing bleeding
- Transfer activated early with two-patient SBAR; tachycardia recognised as major haemorrhage despite 'normal' BP

Debrief points

- At what moment did this become a PPH — and how much blood had SHE actually lost by then?
- Why does the bladder matter, and who remembered it?
- What does 'she's compensating' mean for a young mother, and when would she have crashed?

Case 2: Eclamptic Seizure at 36 Weeks

MgSO₄ loading + maintenance • BP control • toxicity monitoring • left lateral care

Scenario brief — read aloud to the team

A 24-year-old primigravida at 36 weeks attends complaining of a severe frontal headache and 'flashing lights' since this morning. Her ankles and hands are visibly swollen. While the nurse is measuring her blood pressure (168/112), she stiffens and begins a generalised tonic-clonic seizure.

Setting, roles & equipment

Location	Consultation room → treatment room.
Participants	Nurse, doctor, second nurse; patient actor/manikin; husband actor optional.
Equipment	Adult manikin or actor→manikin swap for seizure, mock MgSO ₄ ampoules + dilution card, calcium gluconate prop, BP cuff, oxygen, suction, IV setup, mock labetalol/nifedipine, fetal Doppler prop.
Facilitator controls	Seizure lasts 90 seconds. Second seizure at +10 min ONLY if MgSO ₄ not loaded by then. Persistently severe BP until antihypertensive given.

Initial patient status

Stage	BP	HR	RR	SpO ₂	Neuro	Fetus
Pre-seizure	168/112	96	18	97% air	Headache, visual flashes, brisk reflexes	Movements present
Post-ictal	172/118	104	14	93% air	Drowsy, responds to voice	FH 148 if checked
After MgSO ₄ + BP drug	148/96	92	16	97% on O ₂	Waking, oriented	FH 140

Facilitator progression — how the case unfolds

Stage / trigger	Patient state	Expected team response
0–2 min	Tonic-clonic seizure	Left lateral position, protect from injury, time noted, nothing in mouth, oxygen + suction ready, help called
2–4 min	Seizure self-terminates, post-ictal	Eclampsia named; ABCDE; MgSO ₄ loading dose PREPARED using the dilution card (4 g IV over 5–15 min)
4–10 min	Drowsy, BP severe	MgSO ₄ loading given with rate verbalised; maintenance infusion 1 g/h planned for transfer; BP treated per protocol
10–15 min	Stabilising	Toxicity monitoring stated (RR, reflexes, urine output); calcium gluconate drawn up and kept with patient; fetal heart checked AFTER mother stable
Wrap-up	Stable for transfer	Urgent transfer for delivery arranged; left lateral during transport; SBAR includes MgSO ₄ running and monitoring needs

Expected critical actions — observer ticks each

- Pre-seizure red flags (headache + visual changes + severe BP + oedema) verbalised as severe pre-eclampsia
- Seizure managed safely: left lateral, protection, timing, no restraint, nothing in mouth
- Eclampsia diagnosed and MgSO₄ chosen FIRST-line (not benzodiazepine)
- Loading dose correct: 4 g IV over 5–15 min, prepared against the dilution card with double-check
- Maintenance 1 g/h planned and prepared to continue during transfer
- Calcium gluconate 10% 10 mL identified as antidote and kept with the patient
- Toxicity monitoring verbalised: RR $\geq$ 12, reflexes present, urine output
- Severe BP treated per protocol after the seizure
- Mother stabilised before fetal assessment; urgent transfer for delivery with complete SBAR

Debrief points

- Which morning symptoms should have triggered urgent assessment even at reception?
- Why magnesium and not diazepam — and what makes magnesium dangerous?
- What must travel WITH this patient in the ambulance/boat?

LIMA PULSE

Case 3: The Newborn Who Doesn't Breathe

Warm-dry-stimulate • PPV in the golden minute • MR SOPA • 3:1 compressions

Scenario brief — read aloud to the team

The same precipitous-birth scenario, minutes earlier: a baby girl has just been delivered in your treatment room at term. She is floppy, blue, and makes no cry. The cord is intact. The mother is stable for now and the second nurse is with her.

Setting, roles & equipment

Location	Treatment room, resuscitation surface prepared (or improvised).
Participants	Doctor + nurse on the newborn; second nurse manages mother; roles may swap.
Equipment	Newborn manikin, warm towels ×2 + hat, newborn BVM (240–500 mL) + masks, stethoscope, timer, suction bulb, mock adrenaline 0.1 mg/mL, oxygen source.
Facilitator controls	HR by auscultation: initially 70. With EFFECTIVE PPV (good seal, chest rise, 40–60/min) → HR rises to 120 and breathing starts by 2–3 min. With poor technique → HR falls to 50 → compressions required. Announce chest rise only when technique verbalised/correct.

Initial patient status

Stage	Tone	Breathing	HR	Colour	Notes
Birth	Floppy	None	70	Blue/pale	No cry; term baby; meconium-free fluid
After 30 s effective PPV	Improving	Gasping	95→110	Pinking centrally	Chest rise visible
If PPV ineffective	Floppy	None	50	Blue	→ 3:1 compressions + fix ventilation (MR SOPA)
Recovery	Good flexion	Crying	140	Pink	To mother, skin-to-skin, hat, observe

Facilitator progression — how the case unfolds

Stage / trigger	Patient state	Expected team response
0–30 s	Floppy, apnoeic, HR 70	Dry vigorously, remove wet towel, stimulate, airway neutral position, call the time aloud
30–60 s	No breathing after stimulation	PPV started with room air BEFORE 60 seconds — rate 40–60/min, watching for chest rise
60–90 s	Chest not rising (facilitator states)	MR SOPA run aloud: Mask, Reposition, Suction, Open mouth, Pressure, Alternative — ventilation corrected
90 s–3 min	HR response per technique	HR reassessed every 30 s by auscultation; if <60 despite 30 s effective PPV → 3:1 compressions, two-thumb technique, oxygen added

3–5 min	Improving with correct care	Compressions stop when HR >60; PPV continues until breathing; warmth maintained throughout; APGAR noted without delaying care
Wrap-up	Pink, crying or supported	Skin-to-skin/warmth, glucose risk considered, neonatal transfer arranged if any ongoing support was needed; mother informed first

Expected critical actions — observer ticks each

- Warmth managed aggressively: dried, wet towel replaced, hat on — verbalised as part of resuscitation
- Initial assessment (tone, breathing, HR) completed within 30 seconds
- Effective PPV running before 60 seconds of life (golden minute met)
- Ventilation rate 40–60/min with visible chest rise; room air used initially for a term baby
- MR SOPA sequence used when chest failed to rise — ventilation fixed before escalating
- HR reassessed every 30 seconds and used as the marker of effectiveness
- Compressions started only when HR <60 after 30 s of EFFECTIVE PPV; 3:1 ratio, two-thumb technique
- Suction not used routinely; APGAR did not delay resuscitation
- Parents informed with compassion; transfer/observation planned appropriately

Debrief points

- Why is ventilation — not compressions — the heart of newborn resuscitation?
- What told you the ventilation was actually working?
- How would you run this if the mother started bleeding at the same time (link to Case 1)?