

Well Newborn Care

The First 48 Hours

A Clinical Journey from
Delivery to Discharge

Note: This deck utilizes a chronological framework to map the physiological milestones of newborn care.



0h

48h

NotebookLM

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Fifth Year • 2026-2027

Refs: Egge JA et al. Care of the Well Newborn. Pediatrics in Review. 2022;43(12):676–690. · Benitz WE; AAP Committee on Fetus & Newborn. Pediatrics. 2015;135(5):948–953. · Moon RY et al; AAP Task Force on SIDS. Pediatrics. 2022;150(1):e2022057990.

Well newborn care

02:00 — the delivery room

The scenario · a question to open with

Layla, 26, has just delivered a term baby boy. He cries within seconds, turns pink, and moves all four limbs.

The obstetrician says:

“He’s all yours — you have sixty seconds.”



? What are your first moves — and why will this hour shape iron stores, temperature, and breastfeeding for weeks?

Triage: Term? · Breathing? · Good tone? All three ‘yes’ → stay with mother and begin the Golden Hour.

Objectives & our six-stop journey

What we will cover today

1 Golden Hour

Immediate care, first 60 min

2 Ward care & exam

Warmth, history, growth

3 Parents' questions

Feeding, stool, urine, sugar

4 Red flags

When 'normal' turns serious

5 Guidance & screening

Sleep, skin, screens, vaccines

6 Discharge & follow-up

Safe home; what comes next

Before we start: self-study resources

Newborn examination — watch on your own

- Newborn examination videos (~15 min each) — full head-to-toe technique
- HSE Newborn Clinical Examination module (PDF) — structured checklist
- Global Health Media breastfeeding-support videos (Arabic) for mothers
- Use these to master the routine exam so today we can focus on decisions



Goal: Come to the bedside able to examine a newborn confidently — then reason through the ‘what next’.

Primary Reference:

Care of well newborn reference

1. Benitz WE, Committee on Fetus and Newborn. AAP Policy Statement – Hospital Stay for Healthy Term Newborns. Pediatrics. 2015;135(5): 948-953.

<https://pediatrics.aappublications.org/content/135/5/948>

2. Egge JA, Anderson RH, Schimelpfenig MD. Care of the Well Newborn. Pediatrics in Review. 2022 Dec 1;43(12):676-90.

4. Videos. For breast Feeding support to mothers

https://globalhealthmedia.org/language/arabic/?_sft_topic=breastfeeding.



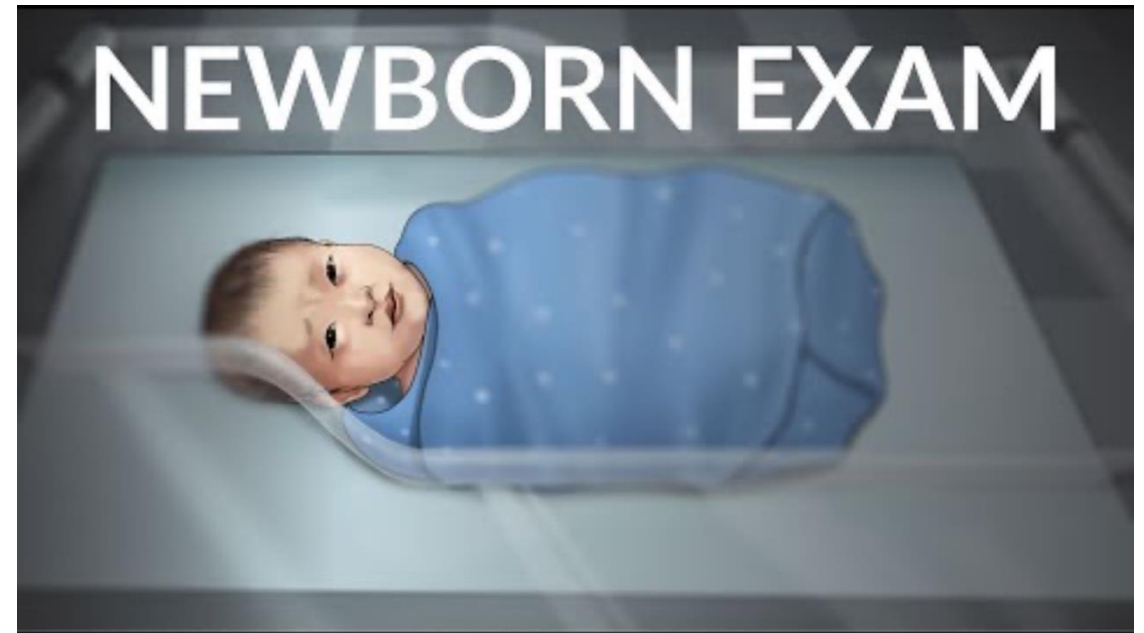
5. Moon RY, Carlin RF, Hand I; AAP Task Force on SIDS. Sleep-Related Infant Deaths: Updated 2022 Recommendations for Reducing Infant Deaths in the Sleep Environment. Pediatrics. 2022;150(1):e2022057990. doi:10.1542/peds.2022-057990

Reference for Newborn exam (self study)

- LINK. 15 minutes each

<https://www.youtube.com/watch?v=cracmPo3iYo>

<https://www.youtube.com/watch?v=rW3ABQ4S6pQ>



Is he term? Definitions first

Anchor · classification by gestational age

- **Term = 37 0/7 – 41 6/7 weeks**
- Preterm: extremely < 28 · very 28–32 · moderate 32–34 · late preterm 34–36 6/7 wk
- Post-term ≥ 42 weeks
- **Our baby: 39 weeks → term, unlocking the Golden-Hour pathway**

Classification by gestational age



? A baby at 35 wk cries with good tone — term or late preterm?
Same steps, but with a lower threshold for temperature and glucose monitoring.

Assessment Planning for Golden hour

Plan for the Golden Hour

Antenatal consultation for high-risk pregnancies
(before the mother comes in for delivery)

Examples

- Maternal conditions: von Willebrand disease, SLE, Cancer
- Fetal conditions: Twin to twin transfusion, Rh hemolytic disease of the newborn, fetal cardiac malformation, congenital diaphragmatic hernia, gastroschisis, open neural tube defects

Consult other specialists ahead of delivery

Plan mode and time of delivery

Plan actions at time of delivery

Have written plans available at time of delivery

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Communication between OB and NICU

when high risk conditions are noted on admission of patient for delivery or monitoring to Labor Ward

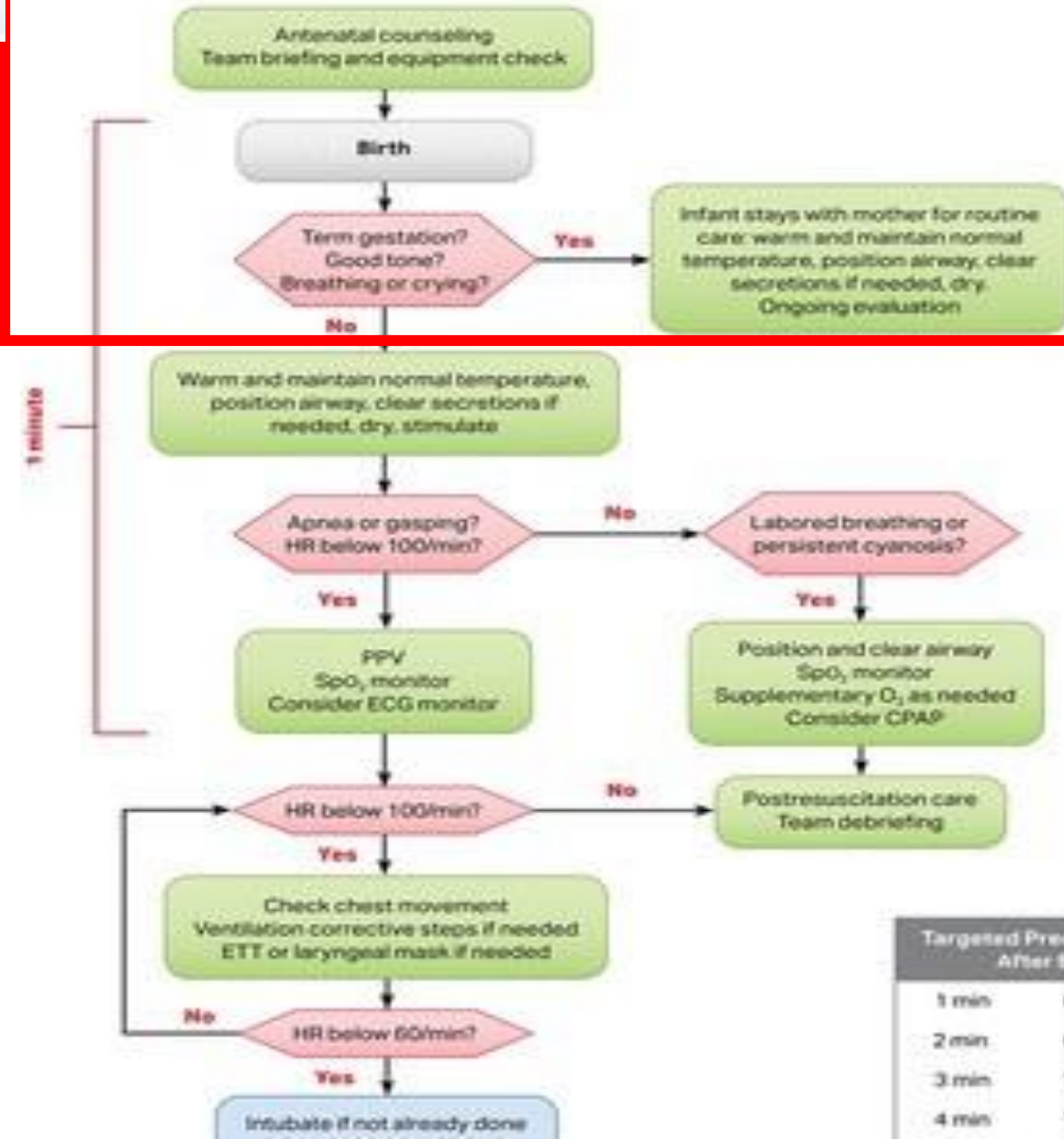
- Preterm labor or premature rupture of membranes
- Multiple gestation
- Known fetal anomaly
- Other complications of pregnancy- preeclampsia, gestational diabetes, intrauterine growth restriction, Rh isoimmunization
- Other medical conditions in mother
- Bleeding- placenta previa or abruption

What is your hospital's plan for this communication?

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Neonatal Resuscitation Algorithm



Targeted Preductal SpO ₂ After Birth	
1 min	60%-65%
2 min	65%-70%
3 min	70%-75%
4 min	75%-80%

The Golden Hour: seven steps

Stop 1 · the critical first 60 minutes

If term, breathing, and good tone — keep him with mother and work in order:

1 Warm

2 Delay cord clamping

3 Skin-to-skin

4 Assess + Apgar

5 Early breastfeeding

6 Postpone procedures

7 · Vitamin K — the one injection we do NOT postpone; a single IM dose prevents bleeding disease.

Step 1 — Warm

The Golden Hour · thermal care

- **Dry immediately under a warm sheet; put on a hat**
- Very gentle stimulation only
- Delivery-room temperature 25°C; use pre-warmed absorbable sheets
- Maintain normal temperature 36.5–37.5°C after birth



If resuscitation is needed: warmth and drying are step one of NRP — don't let the baby get cold while you help him breathe.

Step 2 — Delayed cord clamping (why)

The Golden Hour · cord blood physiology

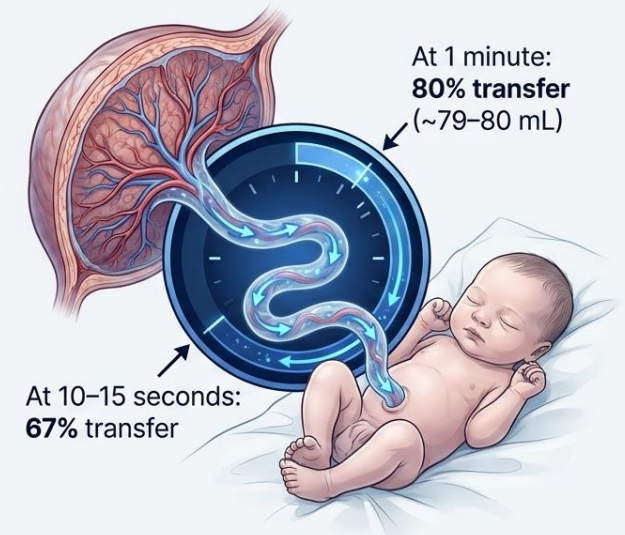
- Cord blood remains in the cord/placenta after birth
- Stem cells replenish blood, skin and organ cells
- At 10–15 s → 67% has transferred to the infant
- By 1 minute → ~80% (about 79–80 mL)

Hour 0 - 1: The Golden Hour

Hour 0 - 1: The Golden Hour

The Physiology of Delayed Clamping

Immediate clamping deprives the infant of ~80 mL of their own blood. Waiting just 60 seconds increases red-cell volume, boosts stem cells, and enough iron stores to last the newborn's first 6 months of life.



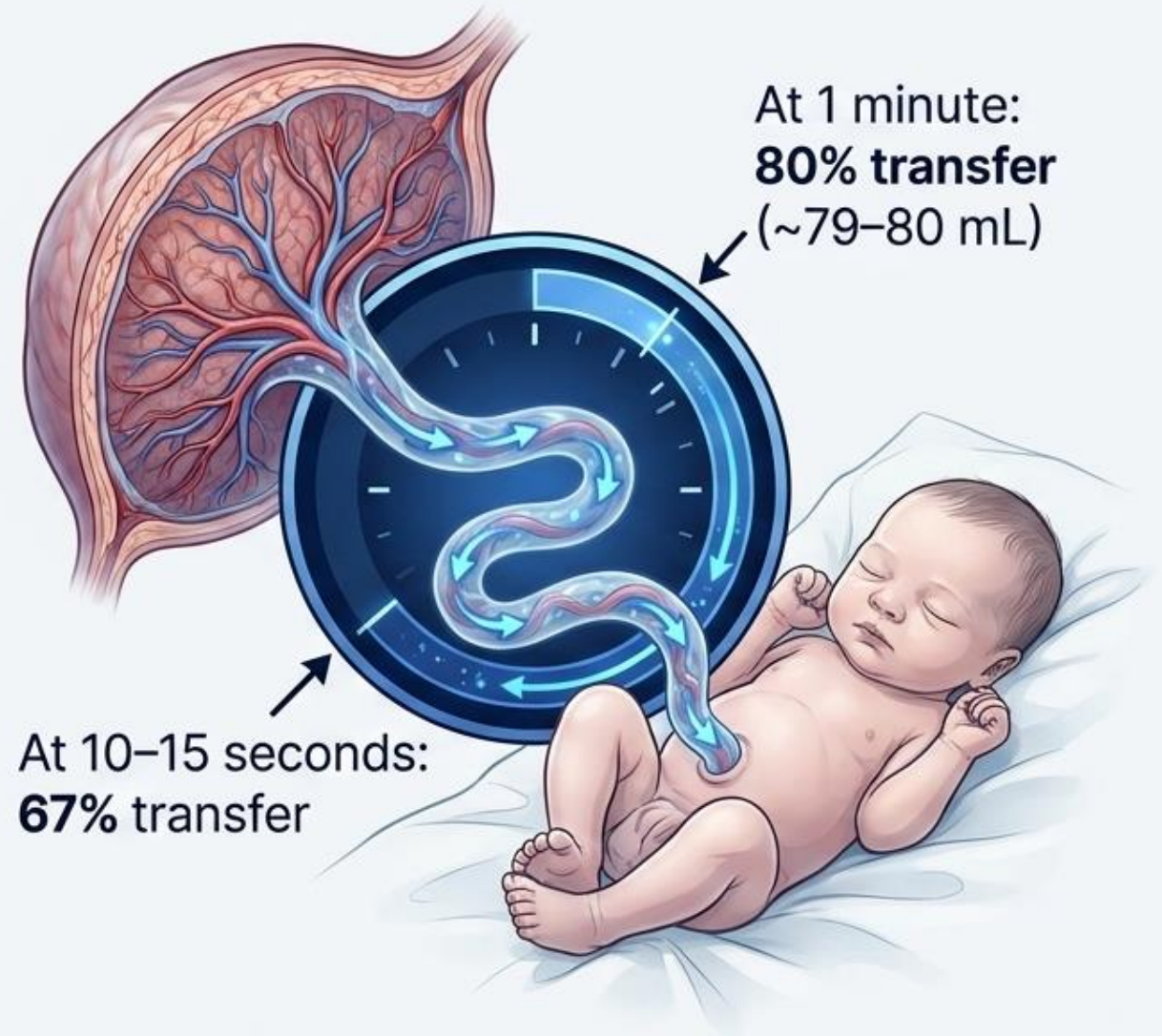
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Idea: waiting a little lets the baby claim blood

- Contains red cells (oxygen), white cells (immunity), and stem cells

The Physiology of Delayed Clamping

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• What medical societies recommend for Delayed Cord Clamping:

Society	Year Issued	Delay (Mins)
ACNM: American College Nurse Midwives	2014	2 - 5
WHO: World Health Organization	2014	1 - 3
RCOG: Royal College of Obstetricians and Gynaecologists	2015	1
SOGC: Society of Obstetricians and Gynaecologists of Canada	2015	0.5
FOGSI: Federation of Obstetric and Gynaecological Societies of India	2016	Not stated
ACOG: American College of Obstetricians and Gynecologists (Officially endorsed by ACNM)	2020	0.5 - 1
FIGO: Federation International Gynaecology & Obstetrics, working group for pre-term birth < 34 weeks	2021	0.5
ILCOR: International Liaison Committee on Resuscitation, review 42 RCT to form policy for premies < 34 weeks	2021	No proof!

Step 2 — Delayed cord clamping (how)

The Golden Hour · action & benefits

Action

- Wait 1–3 min or until pulsation stops
- Term: At least 20-60 sec (Ref: AAP 2025)
 - Term 2–5 min (WHO)

Benefits

- ↑ red-cell volume & birth weight; ↑ iron stores to 6 months in TERM baby
- ↓ anaemia, NEC , Mortality and IVH in preterm

? **Decision:** The intern reaches to clamp immediately. Do you stop her?

Yes: in a vigorous term baby, wait — immediate clamping costs ~80 mL of blood and months of iron.

Step 3 — Skin-to-skin contact

The Golden Hour · ≥ 60 minutes, uninterrupted

Place the unclothed newborn on mother's bare chest for ≥ 60 min:

- ↓ hypothermia and hypoglycaemia
- ↑ exclusive breastfeeding; less crying and pain
- ↓ maternal stress/depression; ↓ postpartum haemorrhage
- Colonisation with normal maternal skin flora



Keep it continuous: keep exams and measurements to a minimum so bonding is not interrupted.

Step 4 — Assess on mother's abdomen

The Golden Hour · no separation

- Do Apgar, vital signs and the routine exam while skin-to-skin
- Maintains physiologic stability
- Avoids unnecessary separation
- Supports uninterrupted bonding



? Bedside: The nurse wants to take him to the warmer to 'check him properly' — necessary?

No: it can all be done on the mother's abdomen. Separation is the exception.

The Apgar score

The Apgar score: meaning & interpretation

Table 1. The Apgar Score

The Apgar Score	0	1	2
Heart rate	Absent	<100 beats per min	>100 beats per min
Respiratory effort	Absent	Weak cry; hypoventilation	Good cry
Muscle tone	Flaccid	Some flexion	Active motion/Well flexed
Reflex irritability	No response	Grimace	Cry/Cough/Sneeze
Color	Blue/Pale	Acrocyanotic	Completely pink

- **Scored at 1 and 5 minutes; 5-min score 7–10 = normal**
- **Assesses transition from intra- to extra-uterine life**

What Apgar is NOT

- May reflect resuscitation, but does NOT guide it
- Does NOT predict neurologic outcome or development

Five signs: heart rate, respiratory effort, muscle tone, reflex irritability, colour (0–2 each).

The initial assessment: what · when · who

The Golden Hour · the first hour

WHAT

- Need for resuscitation
- Gestational age & birth weight
- Apgar score
- Anomalies & infant ID
- Maternal risk factors needing evaluation

WHEN

- Immediately after delivery
- Within the first hour
- Done while skin-to-skin

WHO

- Low-risk: L&D nurse or birth attendant
- High-risk: neonatal resuscitation team present at delivery

Step 5 — Early breastfeeding

The Golden Hour · first latch within the hour

- **Help the infant latch within the first hour, while skin-to-skin**
- Oxytocin → uterine involution & ↓ postpartum bleeding
- Boosts milk production and exclusive-breastfeeding rates
- **Predicts exclusive breastfeeding at 6 months**
- Long term: ↓ infant mortality &, child infections, prevent child and improve cognitive development , ↓ maternal cancers



Reassure Layla: colostrum is small but exactly enough; frequent early latching brings the milk in.

Step 6 — Postpone non-urgent procedures

The Golden Hour · protect the first hour

- **Delay weighing, bathing and injections until after 60 minutes**
- Preserves uninterrupted bonding
- Avoids hypothermia
- Reduces newborn stress

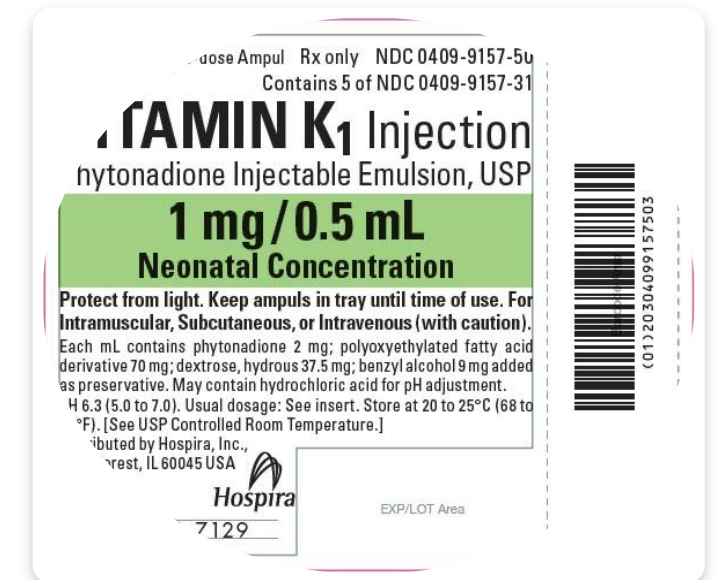


? Which of these can safely wait an hour — and which one (Vitamin K) is the exception we still give? Discuss.

Step 7 — Vitamin K: why every newborn is low

The Golden Hour · fat-soluble clotting factor

- **Essential clotting factor; normally made by intestinal bacteria**
- Immature gut flora make too little
- Low transplacental transfer
- Fetal liver cannot store vitamin K
- Breast milk is a poor source (infant levels 30–60% of adult)



Universal since 1961: prophylaxis is given because every newborn starts life vitamin K–deficient.

Step 7 — Vitamin K: preventing bleeding

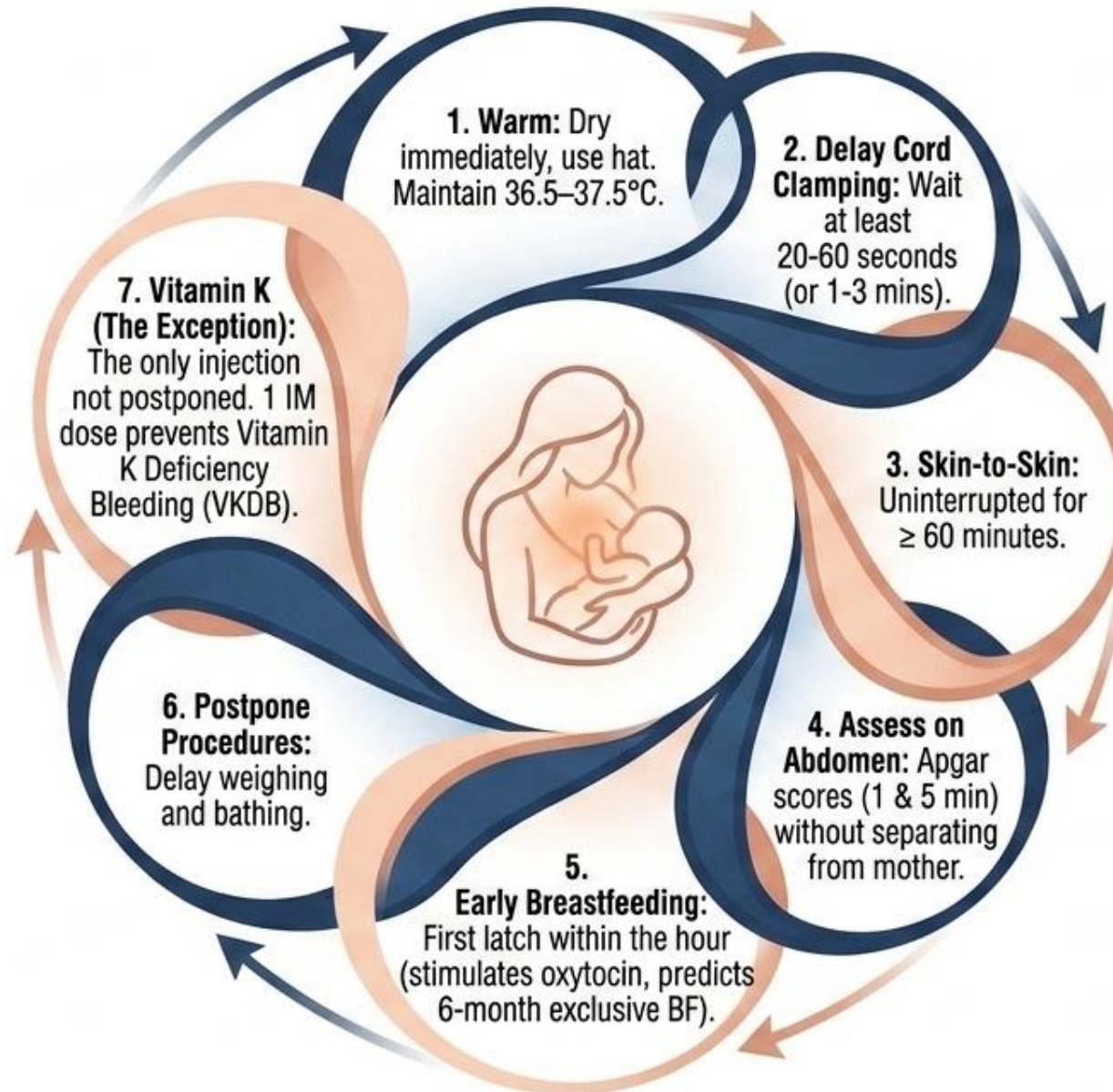
The Golden Hour · VKDB & the counselling moment

VKDB — vitamin K–deficiency bleeding. Classic (day 1–7) or late (1–12 wk): skin bruising, mucosal, umbilical or circumcision-site bleeding, or fatal intracranial haemorrhage. Higher risk if mother took anticonvulsants (phenytoin, barbiturates, carbamazepine) or anti-TB drugs (rifampin, isoniazid).

? Case: Layla refuses: “Why does my healthy baby need a painful shot on day one?”

Counsel: “Healthy babies can’t make enough vitamin K yet. One IM dose at birth prevents bleeding — including into the brain — that can strike a well baby days to weeks later. It has protected newborns since 1961.”

Hour 0 – 1: The Golden Hour



Case —

Stop 1 recap · supporting breastfeeding

? **Q1:** What TWO steps in the delivery room support this mother to breastfeed her baby?

- Skin-to-skin contact (30–60 min), uninterrupted
- Initiation of breast milk within the first hour



Why it matters: these two Golden-Hour steps together are the strongest early predictors of exclusive breastfeeding at six months.

To the post-delivery department: warmth

Stop 2 · sending the baby to the ward

- **Keep the baby dry**
- Wrap in adequate clothing in two layers
- Ensure the head and extremities are well covered
- The delivery-room-to-ward handoff is where heat is most often lost



Remember: a warm baby feeds better and is more stable — protect temperature at every transfer.

Case — rooming-in at a Baby-Friendly hospital

Stop 2 · supporting breastfeeding during the stay

? Q4: Mother had skin-to-skin and fed in the first hour; she asks if the baby can stay in her room. How do you support breastfeeding?

- **Rooming-in — the baby stays with his mother**
- Facilitates bonding and empowers parents
- Encourages cue-based (on-demand) feeding



Answer: Yes — round-the-clock rooming-in is exactly what a Baby-Friendly hospital does to protect breastfeeding.

Temperature regulation during the stay

Stop 2 · why the ward chases every degree

- Measure temperature at least once daily — twice if < 37 wk or < 2500 g
- Hats cut heat loss ~25%; keep dry, clothed, away from drafts
- Allow rooming-in / skin-to-skin; adjustable room controls
- Delay first bath 6–24 hours

Unclothed newborn at 23°C
=
unclothed adult at 0°C

Red flag: hypothermia can be the first — and only — sign of infection. Take a cold baby seriously.

Before discharge: timing of the exam

- The first 24–48 hours matter most
- The clinician's examination is completed in the first 24–48 hours after birth
- Most complications of a normal newborn occur in the first 24–48 hours
- Discharge is generally after ~48 hours for this reason
- Close observation and daily essential routine care protect health and survival

? **Q5.1 / Q5.2:** When is the exam completed — and what must be documented before discharge?

Preview: feeding established, and passage of BOTH stool and urine documented (we return to this).

The examination at 24–48 hours

Stop 2 · history, nurse assessment & purpose

- **Take a full history**
- Review the nurse's assessment — it is complementary; nurses often examine fully first

Purpose of the exam

- Identify risk factors & anomalies
- Reassure parents about their infant's health
- 'Discharge teaching': safe sleep, skin/cord care, jaundice, voiding



Taking the history

Stop 2 · prenatal, maternal & delivery

Prenatal / antenatal

- Maternal age; method of pregnancy
- Maternal disease Before/during Pregnancy (UTI, PET, DM); blood group & Hepatitis B status
- Maternal screens (1st/2nd/3rd); medications in pregnancy & labour
- Fetal history (First , second ,third) growth, Placenta, anomalies, Cord, amniotic fluid,
- Family & social history (education, smoking, work); prior pregnancies & outcomes

Delivery

- Mode of delivery; gestational age; birth weight
- Maternal medication during labour
- Resuscitation history and any problems during delivery
- Apgar score; what happened to mother or baby

The second exam — with the parents

Stop 2 · ideally at 24–48 hours together

- Initial assessment was immediately after birth
- **Ideally do a second, fuller exam at 24–48 hours — preferably with parents present**
- You are about to meet a friendly young couple, very excited about their first baby boy



Why with parents: the exam becomes teaching and reassurance — they see their baby is well and learn to care for him.

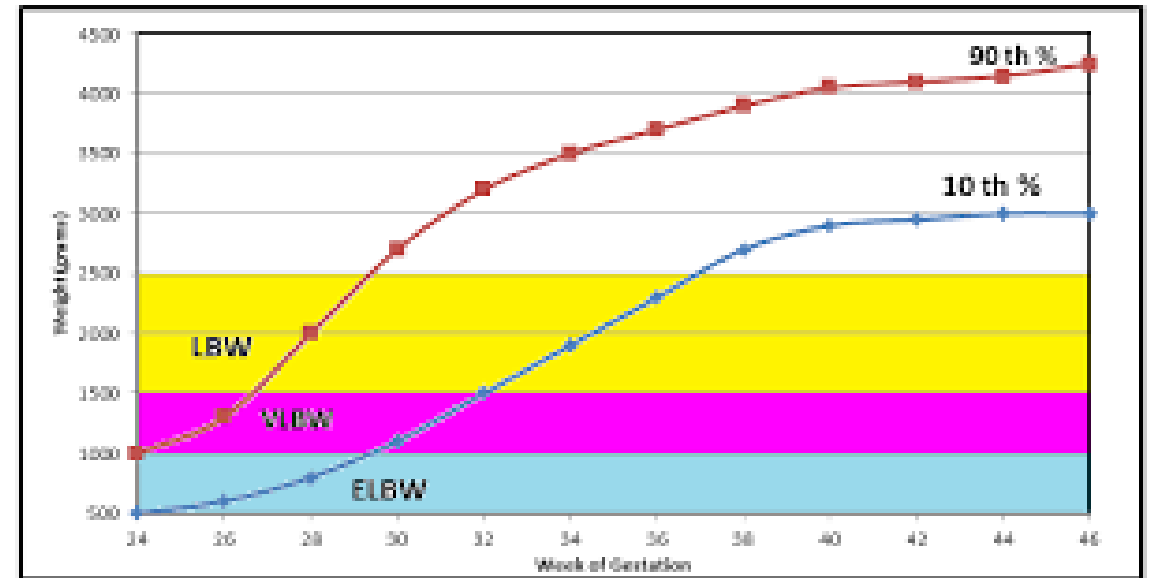
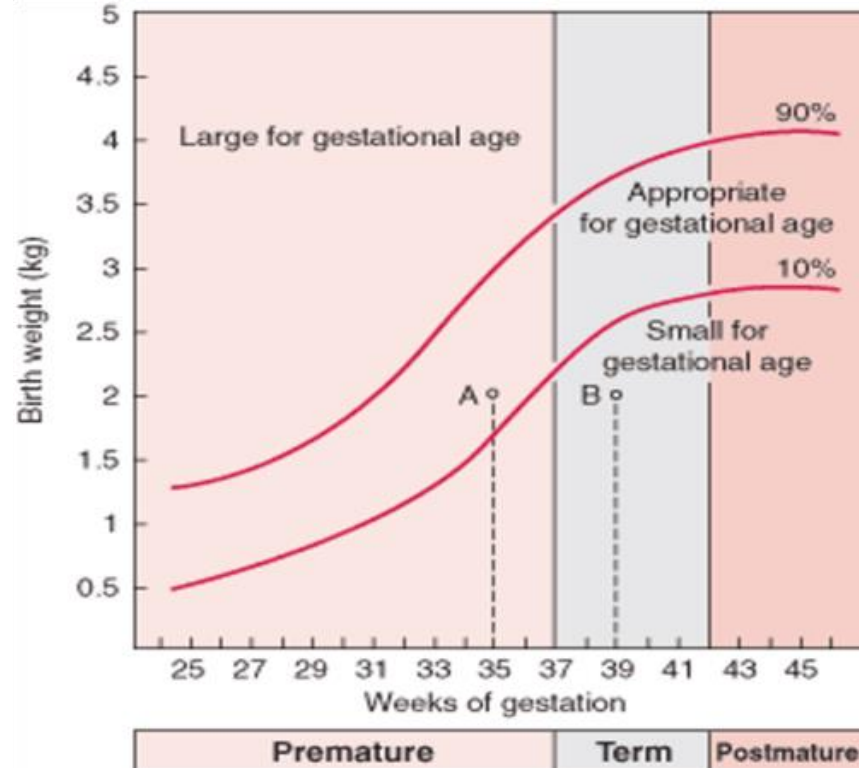
Routine care before discharge & parent education

Stop 5 preview · what parents must understand

- **Understand normal voiding and stooling patterns**
- Understand the risk of haemorrhagic disease and preventive anticipatory guidance
- Identify the most common benign newborn problems and guide parents
- Identify the mandatory neonatal screens
- Safe sleep and prevention of sudden infant death (SIDS)

Framing: most of what follows is reassurance grounded in physiology — plus a few genuine red flags and one firm discharge rule.

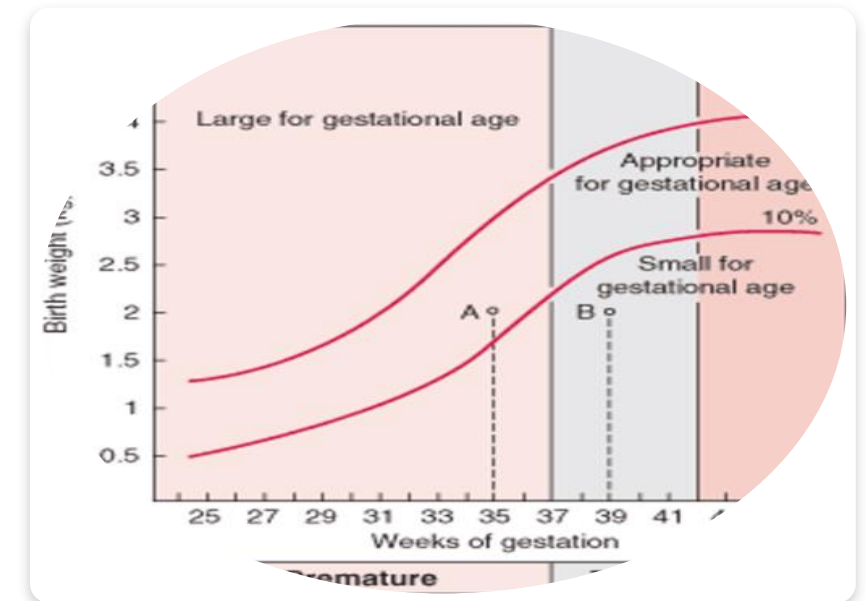
Growth assessment at Birth :weight



Growth & gestational-age assessment

Stop 2 · Q7 · addressing parental concerns

- **Q7.1 — How do you assess gestational age?**
- **Q7.2 — How do you assess growth?**
- Together these tell you whether the baby is AGA, SGA or LGA — which drives later risk (hypoglycaemia, feeding, temperature)



Parents ask: “Is our baby the right size and maturity?” — the next slides give you the tools to answer.

Assessing gestational age

Stop 2 · dating the pregnancy

- **Last menstrual period (LMP)**
- First-trimester ultrasound (most reliable dating)
- Dubowitz / Ballard examination when dates are uncertain

Bedside: when LMP and ultrasound disagree, first-trimester ultrasound wins; use Ballard only when dating is truly unknown.

Naegele's rule (EDD)

- $EDD = LMP + 7 \text{ days} - 3 \text{ months}$
- Example: LMP 22 / 9 → EDD 29 / 6
- Confirm early with ultrasound

Assessing growth

Stop 2 · measure, plot, classify

- Measure weight, length and head circumference
- Plot on CDC, WHO, for term baby
- Plot on Fenton and Intergrowth 21st charts (preterm)
- Classify as AGA, SGA or LGA



? **Bedside:** His weight is below the 10th centile at 39 weeks — what does SGA change?

Plan: SGA → actively monitor glucose and temperature and support feeding closely.

Normal growth measures

Stop 2 · what the numbers should be

Weight

- Regains birth weight by ~2 weeks
- ~30 g/day gain in the first month

Length

- Head-to-heel, leg extended
- Average range 46–56 cm

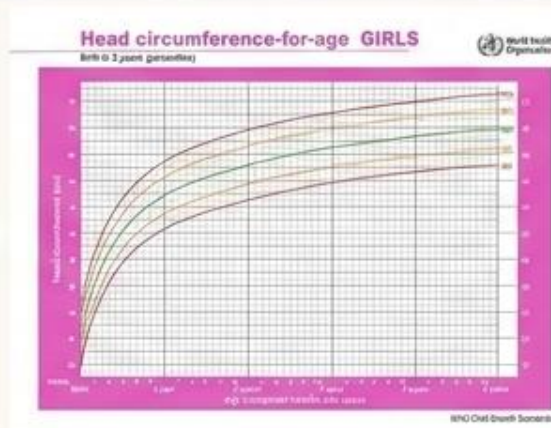
Head circ.

- Average 33–35 cm (13–14 in)
- Re-measure after moulding/caput resolves

Watch: head circumference too small = microcephaly <3rd centile; too large = macrocephaly >97th — both need evaluation.

Selecting the Right Growth Chart

Gestational Age	Recommended Chart Standard
Term (37 - 41 6/7 wks)	Use WHO (Standard for breastfed infants) or CDC (US Term).
Preterm (< 37 wks)	Use Fenton (Separate by sex) or Intergrowth-21st (International standard).



Baseline Normalcy



Head Circumference:
33–35 cm (13–14 in).

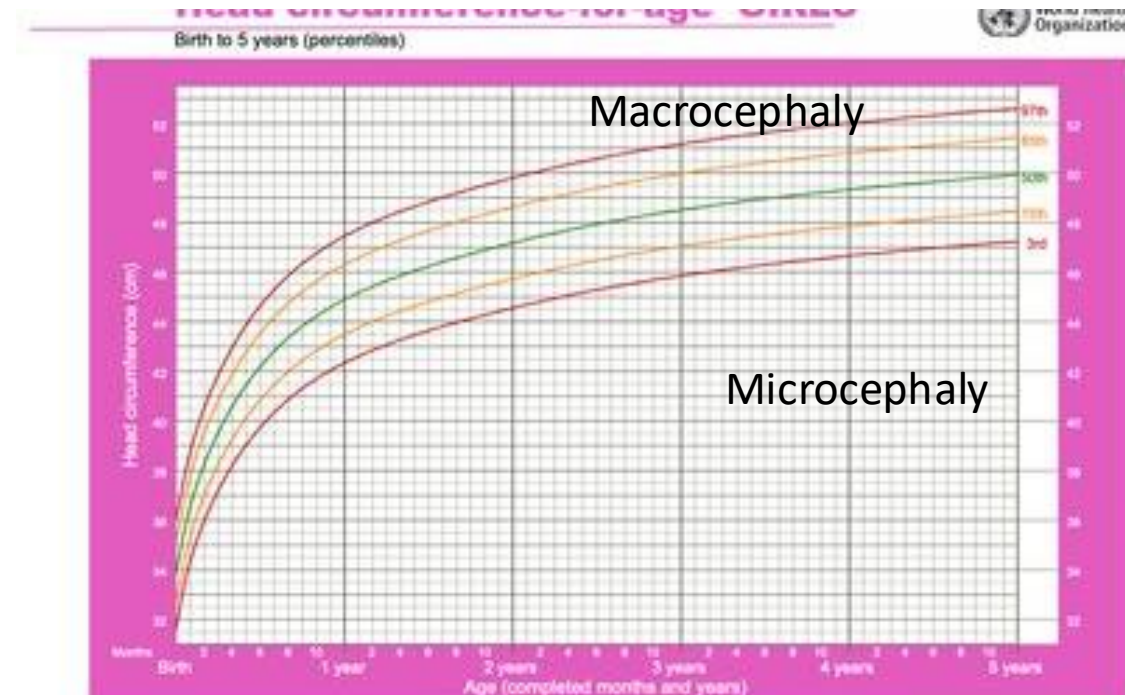
Clinical Note:
Re-measure after molding/caput succedaneum resolves.

Length: 46–56 cm
(Head-to-heel, leg extended).

Growth

Head circumference:

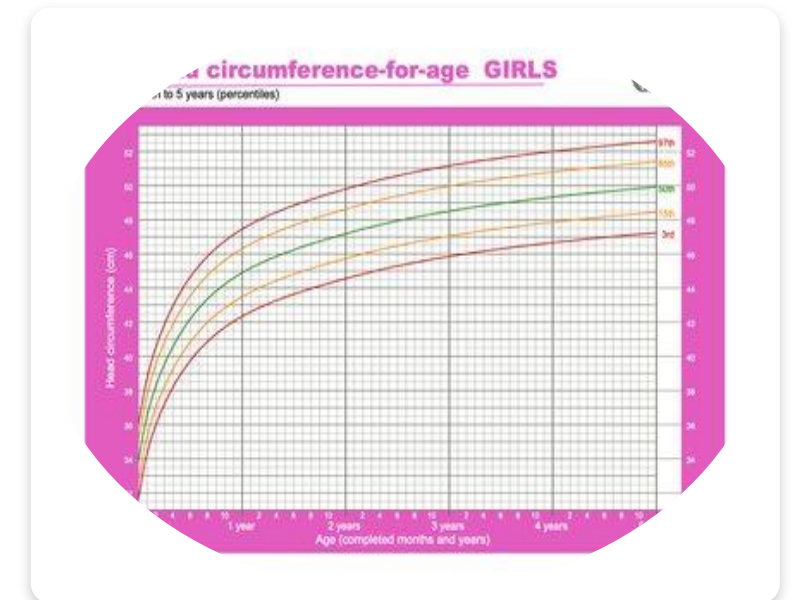
- Place tape measure above eyebrows and stretch around the fullest part of the occipital at the posterior fontanel.



Which growth chart?

Stop 2 · term vs preterm standards

- WHO — growth standard for breastfed infants
- CDC — growth charts for US term children
- Fenton — preterm infants (separate girls & boys)
- Intergrowth-21st — preterm < 36 wk and international standard (HC, weight, length)



Rule of thumb: term → WHO/CDC; preterm → Fenton or Intergrowth.
Match the chart to the baby.

Day 1 — the parents have a list

Stop 3 · five questions at the bedside

1 day old, breastfeeding every 2–3 h; exam and vitals normal. But:

- urine 4–5×, 'brick-dust' colour
- no weight gain at 24 h
- no stool yet at 24 h



Q8 Does he need formula?

Q9 Is he obstructed (no stool)?

Q10 Is the 'brick-dust' urine a worry?

Q11 Should we check his blood sugar?

Q12 Can we go home and just watch him?

Q8 — “Does he need formula?”

Stop 3 · weight loss & signs of enough milk

- **Early weight loss is normal & common: ~5% -10%**
- Birth weight is regained by ~2 weeks
- Redirect from the number to the feeding relationship (demand feeding)

Answer: No formula — support breastfeeding; supplement only if truly indicated.

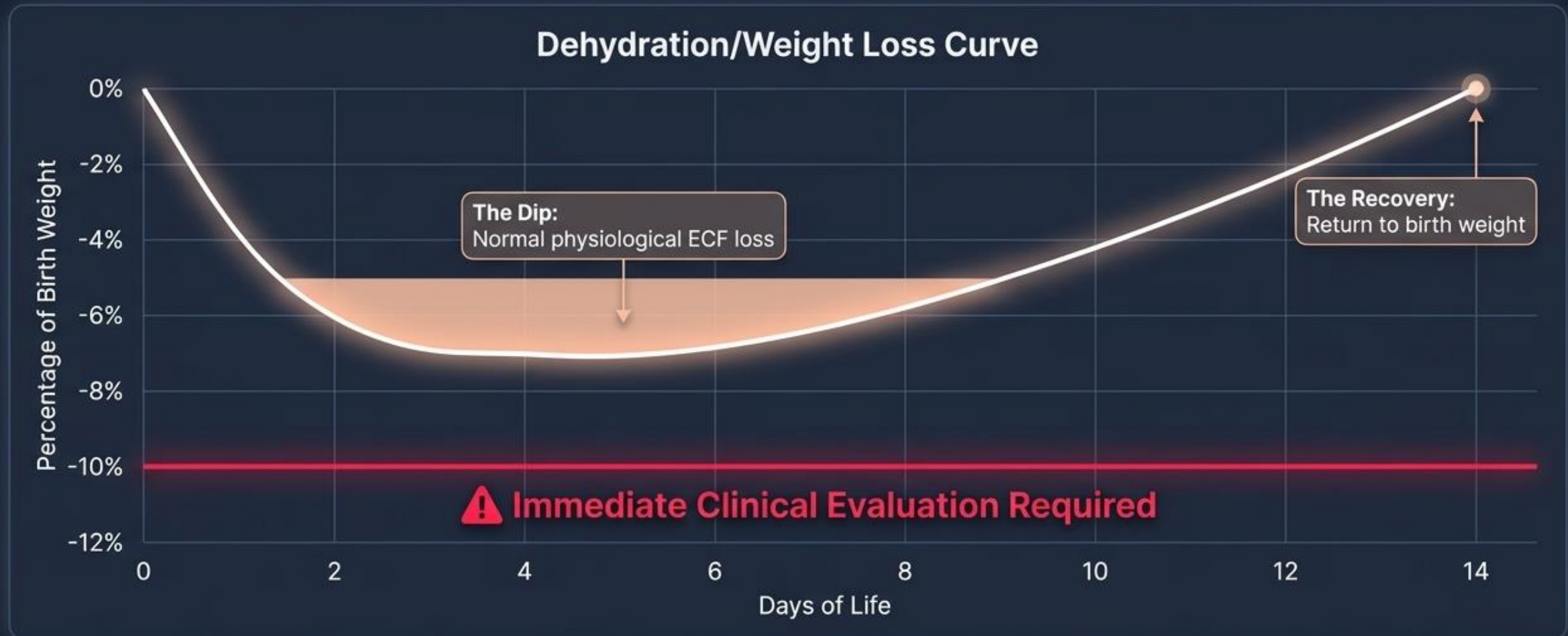
Act sooner if: weight loss > ~10%, signs of dehydration, or poor feeding.

Is he getting enough milk?

- Swallowing heard during feeds
- Breast softens after a feed
- 4–6 voids/day + stooling
- Settles/satisfied after feeds
- Begins to regain weight

Tracking Weight Dynamics

Action Threshold: $>10\%$ weight loss is a clinical red flag requiring active evaluation of lactation management and dehydration risks.



Q9 — Normal stool: meconium → transition

Stop 3 · what to expect

- **First meconium usually within hours, before 48 h — black, tarry, sticky**
- Transition stool as milk comes in: green/brown → seedy, loose, mustard-yellow
- Gastrocolic reflex → common to stool with nearly every feed once milk is in

So far: at 24 h with no stool he can still be normal — but the clock runs toward 48 h.

? Turn: What if 48 hours pass and there is still no stool?



Q9 — Delayed stool > 48 h (red flag)

Stop 4 · the differential & work-up

First, at the bedside: re-check the anus for a normal opening; keep observing if feeding well with no distension or vomiting.

Delayed passage > 48 h can signal serious disease:

Imperforate anus

± fistula — inspect the perineum

Meconium plug

Functional distal obstruction

Hirschsprung disease

Aganglionosis — classic culprit

Work-up: contrast (barium) enema; rectal suction biopsy is the gold standard for Hirschsprung disease.

Q10 — Normal voiding

Stop 3 · timing & detection

- First urination usually within 12 h
- Investigate if there is no urine by 24 h
- Then 4–6 voids/day
- Urine is easily missed when meconium is frequent

Why it's tricky: a wet diaper can be masked by stool or simply not recorded — so we look deliberately.



Next: how to detect and document urine.

Q10 — How to detect urine

Stop 3 · from simple to invasive

Review notes

Did the baby void at delivery or elsewhere but it wasn't recorded?

Diaper strips

Colour-change strips reveal even small amounts of urine

Cotton ball / bag

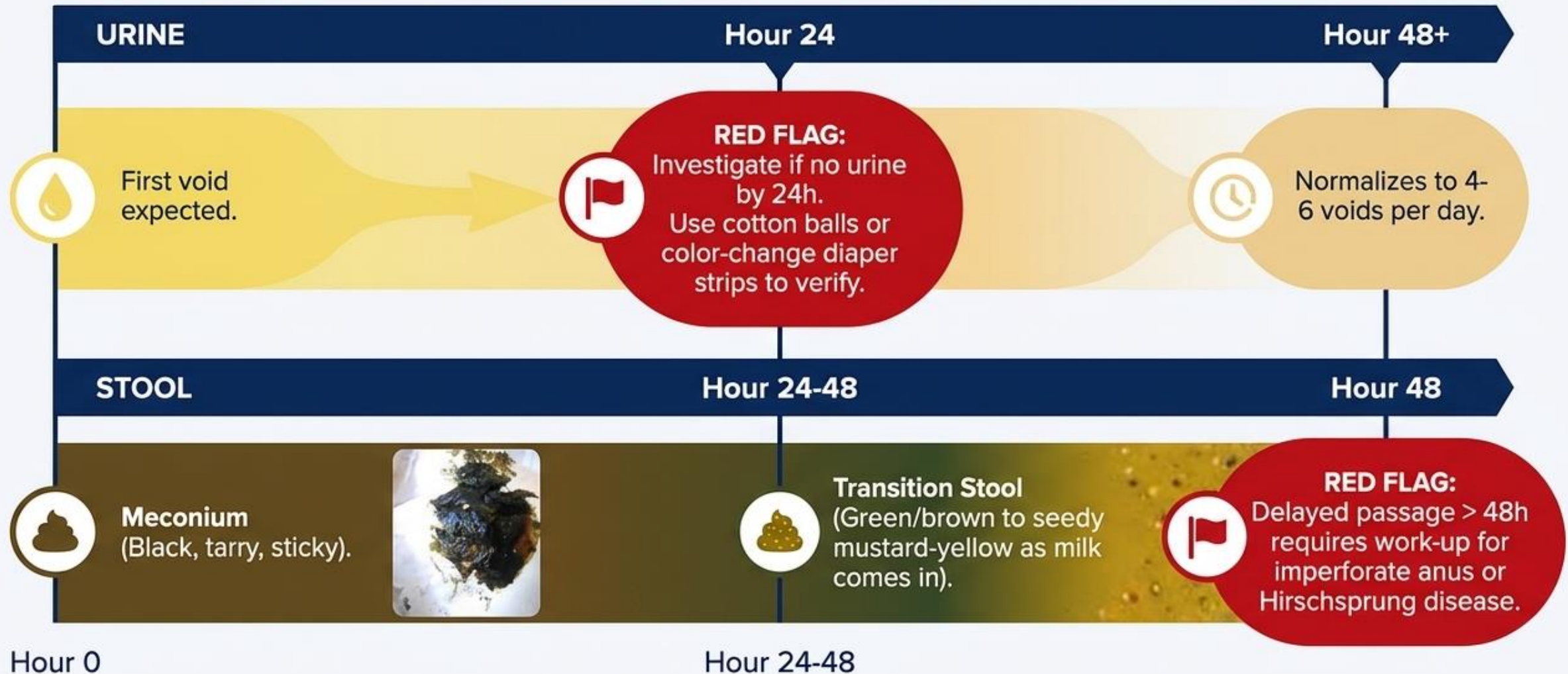
Place between the labia, or apply a collection bag

Invasive (if anuria)

Catheterisation, bladder/renal ultrasound, urology consult, renal function

Stepwise: exhaust simple methods first; reserve catheter and imaging for genuine anuria concern.

The Output Progression Matrix



Decoding Parental Concerns

The Bloody Diaper

Symptom: Red/orange stain in diaper.



Clinical Reality

'Brick-dust' urate crystals.
Benign and common.

(Also: clear/blood-tinged pseudomenses in girls is normal hormone withdrawal).

The Cold Baby

Symptom: Low body temperature upon transfer.

Clinical Reality

Clinical Red Flag.

Hypothermia can be the first and only sign of infection.

Unclothed newborn at 23°C =
unclothed adult at 0°C.

Blood Sugar Checks

Symptom: Does my baby need a glucose prick?

Clinical Reality

Not routinely. Term, Appropriate for Gestational Age (AGA), asymptomatic infants do not require routine screening.

Only check if symptomatic, IDM, SGA, or LGA.

Q11 — “Should we check his blood sugar?”

Stop 3–4 · hypoglycaemia risk

- A physiologic glucose dip is expected in the first 2–3 hours
- Screen any infant with symptoms:
- jittery, sweaty, hypotonic, irritable, apnoeic, temperature-unstable

Our baby: term, AGA, asymptomatic → routine glucose screening is NOT indicated.

? Flip it: Same baby, but the mother is diabetic — what changes?

Who is at risk?

- Infant of a diabetic mother (IDM)
- SGA or LGA
- Late preterm 34–36 6/7 wk
- Perinatal stress / hypoxia
- Post-term; any sick infant

Q12 — The discharge rule

Stop 3 · the rule that ties it together

A newborn should NOT be discharged until the passage of BOTH stool and urine is documented.

So Q9 (no stool) and Q10 (is he voiding?) were never just reassurance — together they are a discharge gate.

Answer to Layla: “We’ll wait until we’ve seen him stool and urinate, and feeding is going well — then home is safe.”

Skin care: vernix & the first bath

Stop 5 · Q12 · bathing

Vernix caseosa — keep it: sloughed skin + lanugo, high lipid; a moisturiser that reduces water loss and is antioxidant/antimicrobial. Wipe lightly, retain vernix.





Skin Care/Bathing- Vernix Caseosa

- Made of sloughed skin and lanugo hair
- High lipid content
- A moisturizer
- Decreases tran sepidermal water loss
- Antioxidant/antimicrobial properties
- To dry baby, wipe lightly with towel but retain vernix

Skin care: vernix & the first bath

Stop 5 · Q12 · bathing

- WHO: delay first bath ≥ 6 h, preferably after 24 h → promotes bonding & breastfeeding
- Early bath if mother: HBV/HCV/HIV or active HSV → ↓ transmission
- Clean skin well before IM injections
- Do not bathe before temperature is stable (risk of hypothermia & respiratory distress)



Umbilical cord care & nails

Stop 5 · keep it clean and dry

- **Keep the cord clean and dry; clean with soap & sterile water as needed**
- No routine antiseptic — chlorhexidine/alcohol delays separation (systemic-absorption concern)
- Median time to separation 6–7 days
- Daily chlorhexidine × 1 week only for home births in high-mortality regions

Watch for omphalitis: redness, warmth, tenderness, swelling or discharge (~0.7–1/1000; mortality up to 13%).



Nails: clip, cut or file in good light while the baby is calm.

Genital care

Stop 5 · circumcised vs uncircumcised

Uncircumcised

- Requires little effort — clean externally once regular bathing is established
- Do NOT retract the foreskin → pain, bleeding, adhesions

Circumcised

- Keep the penis clean
- Apply simple petroleum ointment so the glans doesn't adhere to skin or diaper

Reassure: both need only gentle, minimal care — over-cleaning causes more harm than good.

Safe sleep — preventing SIDS

Stop 5 · Q13 · the ABCs

Alone · Back · Crib

- Firm flat surface; NO quilts, positioners or soft toys
- No routine sleep in sitting devices (bouncer, car seat)
- Room-share, don't bed-share, for ≥ 6 months $\rightarrow$ $\sim 50\%$ $\downarrow$ SIDS
- Pacifier once breastfeeding is established; home monitors not recommended



Tobacco exposure

Stop 5 · name it at every visit

17%

of SIDS deaths linked to tobacco smoke

8%

of all infant deaths attributable to tobacco

Also ↑

stillbirth, preterm birth, low birth weight, malformations

- Higher rates of ear infections, pneumonia, wheezing and later cancer
- Counsel cessation and a smoke-free home & car — ‘outside only’ is not fully protective

? Practice: How would you raise smoking with a father who says he ‘only smokes outside’?

Ward Protocols: Skin, Cord, and Sleep



Skin & Vernix

Vernix Caseosa: Do not scrub off. This sloughed skin/lanugo is a high-lipid moisturizer and antioxidant.



First Bath: Delay at least 6 hours, preferably >24 hours per WHO



Cord Care

Rule: Keep clean and dry. Use soap and water as needed.

Guidance: Avoid routine antiseptics (chlorhexidine delays separation). Median separation is 6-7 days.

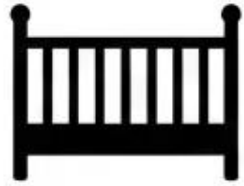


Safe Sleep (ABCs)

Rule: Alone, Back, Crib. Firm flat surface, no soft toys.

SIDS Risk: 17% of SIDS deaths are linked to tobacco smoke. Counsel for completely smoke-free homes and cars ('smoking outside' is insufficient).

Parent education must cover four critical domains of health promotion



Safe Sleep (SIDS Prevention)

Infant must sleep supine (on back), on a flat surface, with feet to the foot of the cot.
Keep sleep space entirely free of soft objects, pillows, and bumpers.



Illness Recognition

Seek immediate medical care for raised temperature (fever in <12 weeks), poor feeding, vomiting, irritability, lethargy, or decreased urine/stool output.



Environmental Safety

Ensure a correctly fitted car seat appropriate for weight/length. Enforce a strictly smoke-free home and vehicle environment.



Hygiene & Care

Educate on normal voiding and stooling frequencies, dry cord care, and basic skin hygiene.

The Mandatory Screening Pillars

Newborn Hearing (NHS)



Context: Identifies congenital hearing loss.

Data: Prevalence in Jordan is 1.4/1000.

Metabolic Bloodspot



Context: Heel-prick test to catch Inborn Errors of Metabolism (IEM).

Targets: TSH, G6PD, PKU.

Hepatitis B Prophylaxis



Context: Highest chronicity risk when acquired in infancy.

Action: Universal birth dose administered within 24 hours of birth (alone is 75–95% effective).



• aMetabolic screen :Timing

- At 2 weeks of age. In Jordan: TSH, G6PD, PKU
- Global IEM incidence ~1:1350; 5–15% of sick NICU neonates have an IEM

Early-onset sepsis (≥ 35 wk)

- Use the neonatal EOS risk calculator (maternal risk factors + the baby's exam) to decide observation vs labs vs **antibiotics**

The 2026 Hepatitis B Policy Shift: Universal vs. Shared Decision-Making

0 to 12 Hours: Immunization



The AAP/Pediatric Position

- Supports **Universal Birth Dose** (<24 hours for stable infants ≥ 2000 g).
- **Rationale:** 12-18% of mothers miss prenatal screening.
- **Mitigates lost/transcribed data errors.**
- **Prevents horizontal transmission from undiagnosed household members.**



The 2026 CDC/ACIP Shift

- Introduces **Shared Clinical Decision-Making (SCDM)** model.
- Allows deferral of birth dose to the 2-month visit.
- **Applies only to infants of documented HBsAg-negative mothers.**

The Strict Protocol (HBsAg-Positive Mothers)

0.5 mL Hep B vaccine
(Left Thigh)

0.5 mL HBIG
(Right Thigh)

MUST be administered **simultaneously**
WITHIN 12 HOURS of birth.

The CCHD Pulse Oximetry Algorithm

Screens for the 5 Ts:
Tetralogy of Fallot, TAPVR,
TGA, Truncus, Tricuspid atresia.

Input: SpO₂ measured on
right hand AND either foot.

≥ 95% in both limbs
AND
≤ 3% difference

Proceed to Discharge.

90%–94% in either limb
OR
≥ 4% difference

Retest in exactly 1 hour.

≤ 89% in any limb

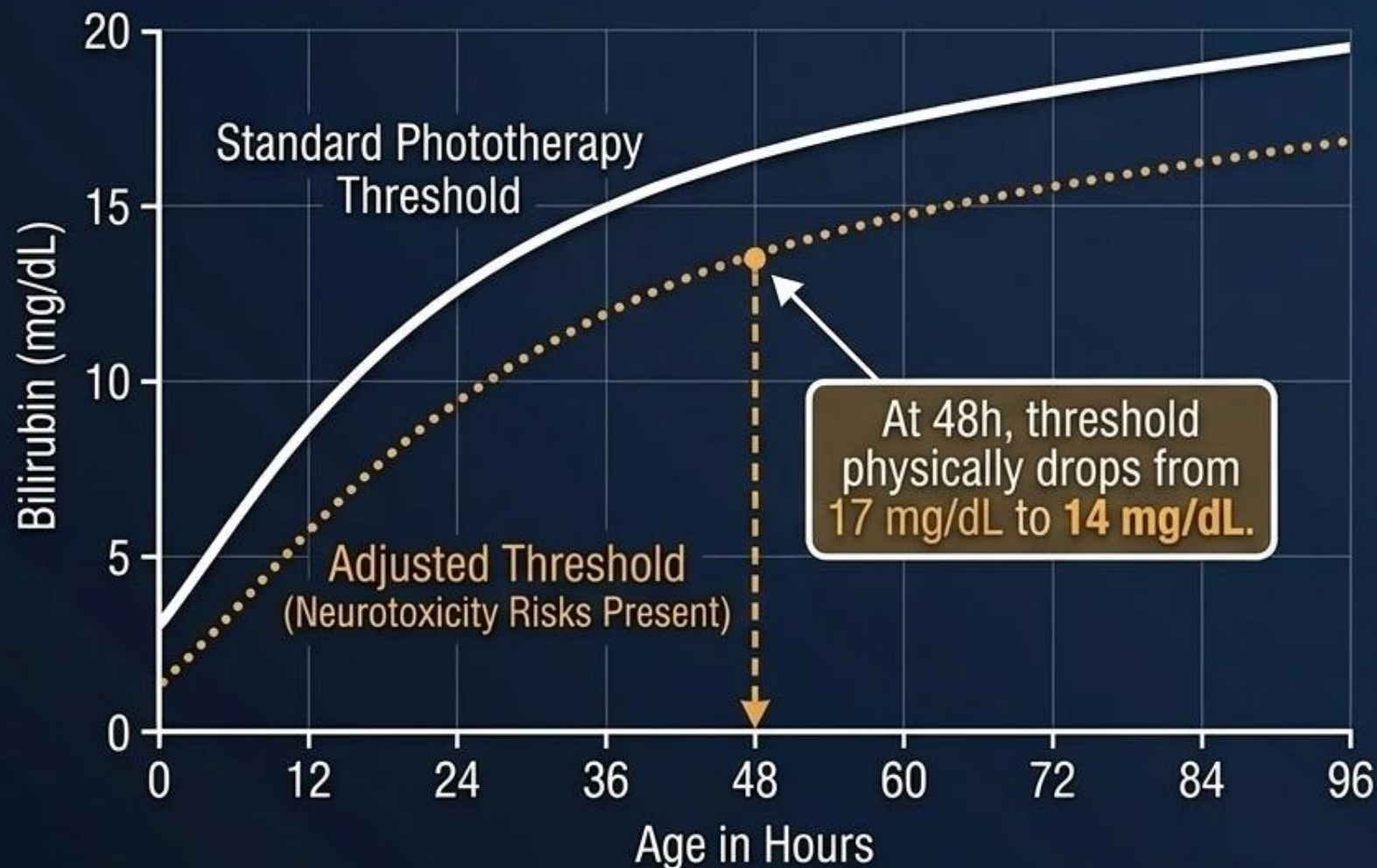
Stop screen. Urgent
Echocardiogram required.

24h

48h

> 24 to 48 Hours: Bilirubin Screening

2022 Hyperbilirubinemia Guidelines: The Neurotoxicity Shift



Neurotoxicity Risk Factor Checklist

- ☐ Albumin < 3.0 g/dL
- ☐ Isoimmune hemolytic disease / Positive DAT
- ☐ G6PD deficiency
- ☐ Sepsis
- ☐ Clinical instability in past 24h

Clinical Insight:

Black race is not protective. Unexplained jaundice warrants G6PD testing based on genetic ancestry. Rapid rise (≥ 0.3 mg/dL/hr in first 24h) indicates active hemolysis.

> 24 Hours: Metabolic & Cardiac Screening

24 to 48 Hours: Discharge Preparation

Bilirubin Post-Discharge Follow-up and Rebound Surveillance

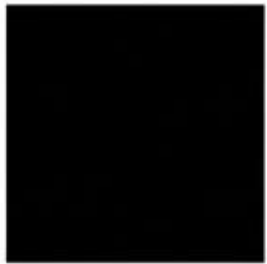
Distance Below Treatment Threshold	Clinical Action / Follow-up
0.1 - 1.9 mg/dL below threshold	If <24h age: Delay discharge. If ≥ 24 h: Retest 4-24h, consider home phototherapy if criteria met.
2.0 - 3.4 mg/dL below	TSB/TcB in 4 to 24 hours.
3.5 - 5.4 mg/dL below	TSB/TcB in 1 to 2 days.
≥ 5.5 mg/dL below	Clinical judgment or 2-3 day follow-up.

Post-Phototherapy Rule

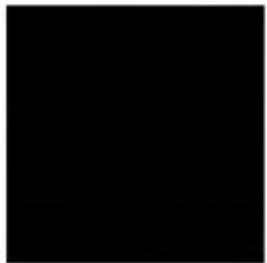
Rebound TSB required in 6-12 hours for high-risk infants.
TcB cannot be used for at least 24 hours after discontinuing lights.

Mandatory prophylaxis and the five pillars of newborn screening

Essential Prophylaxis



[x] Vitamin K:
Intramuscular administration to prevent hemorrhagic disease of the newborn.



[x] Erythromycin:
Ocular administration to prevent neonatal ophthalmia.

The 5 Screening Pillars

1. Newborn Bloodspot

Testing for congenital metabolic and genetic disorders.

2. Hearing

Automated screening per state/hospital protocol.

3. CCHD

Pulse oximetry to detect Critical Congenital Heart Disease.

4. Bilirubin

Jaundice surveillance and risk assessment.

5. Physical Exam

Systematic check of eyes, heart, hips, and testes.

When: discharge mother & baby together when stable.

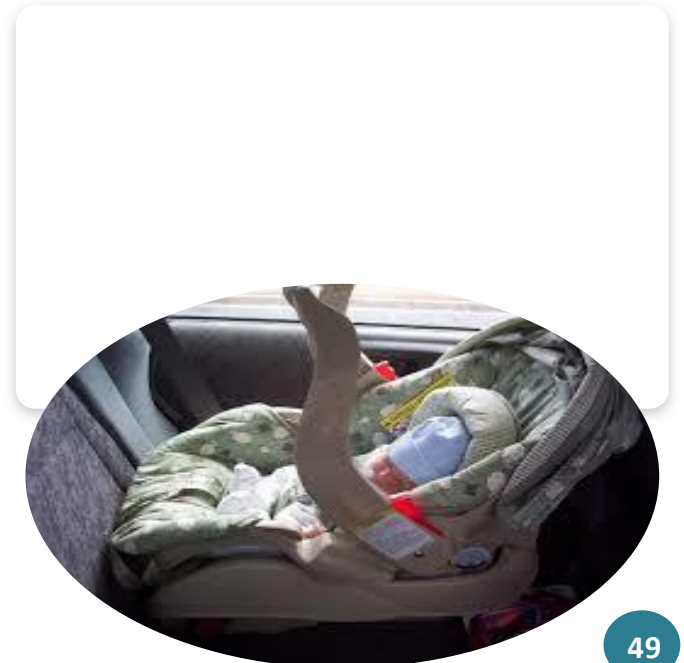
Discharge: timing & teaching checklist

Stop 6 · going home safely

AAP teaching checklist — does the family know before discharge :

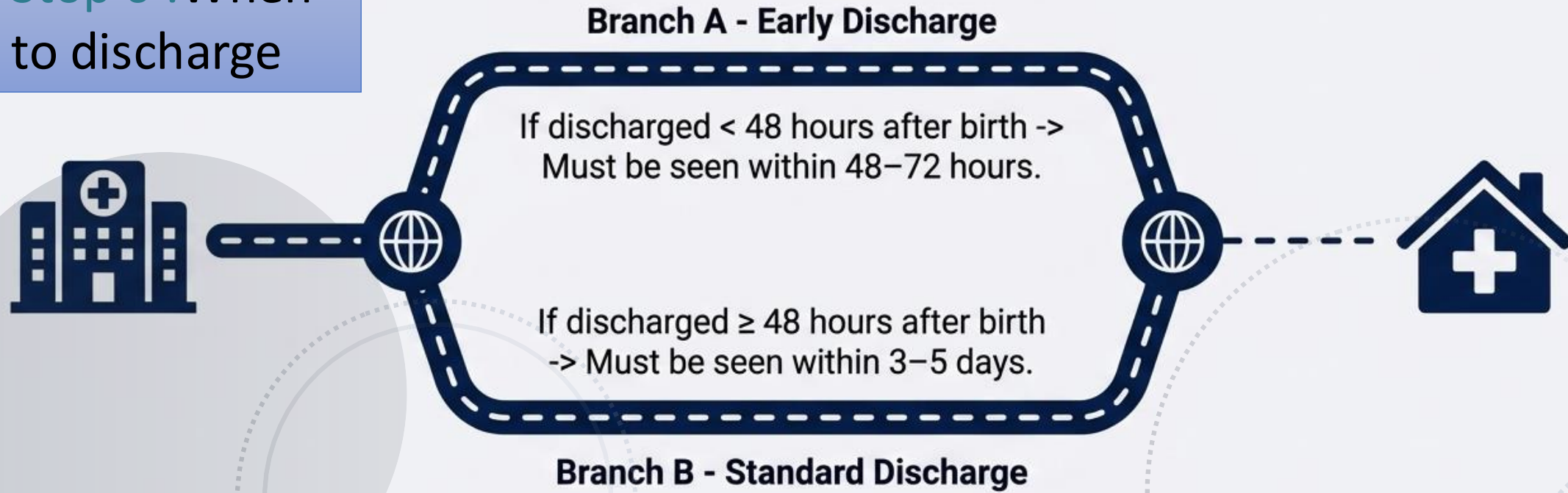
- **Signs of illness** · breastfeeding · normal urine & stool · **jaundice, Omphalitis**
- Cord, skin & circumcision care · temperature taking
- Safe sleep · no tobacco · hand hygiene & caregiver vaccination
- Swaddling (hips abducted) ·
- **correct car-seat use**

Car seat: rear-facing, back seat, correct angle → ~71% ↓ crash deaths; never leave unattended.



Closing the Loop: The Medical Home

Stop 6 :When to discharge



Closing Insight: Early and strict follow-up is the final mechanism to lower the 1-2% 30-day readmission rate for feeding issues and jaundice, ensuring the protective funnel extends into the community.

NotebookLM

Follow-up & readmission

- < 48 h → seen within 48-72 h; ≥ 48 h → within 3-5 days
- Readmission rate:
 - ~1-2% / 30 days (feeding, jaundice): early follow-up lowers it

Bath technique & everyday skin care

· practical guidance (self reading)

Bathing

- Warm water & room; keep bath < 10 min
- Wash face first, then unwrap to bathe body; hat afterwards
- Tub/immersion = less distress, better temperature control
- Only 2–3×/week (more disrupts skin flora & dries skin); mild, non-irritant cleanser

Diaper & skin

- Keep diaper area clean & dry; water or detergent-free wipes
- Zinc-oxide or petrolatum ointments for diaper rash
- Daily emollient (plain petroleum jelly) from first weeks → ↓ atopic dermatitis 30–50% if family history
- Use sunscreen carefully under 6 months

Follow-up, readmission & summary

Stop 6 · closing the loop

Follow-up & readmission

- < 48 h → seen within 48–72 h; ≥ 48 h → within 3–5 days
- Readmission ~1–2%/30 days (feeding, jaundice); early follow-up lowers it

Summary of recommendations

Golden Hour — Warm · delay cord clamping · skin-to-skin · feed early · vitamin K

Reassure with physiology — Weight dip, meconium timing, urate crystals are usually normal

Discharge gate — Stool + urine documented; time discharge to the 24–48 h window

Keep them together — Exam on mother's chest; separation is the exception and do initial and second assessment (24–48 h)

Know the red flags — No stool > 48 h · no void by 24 h · hypothermia · hypoglycaemia risk

Screen & follow up — Hearing · CCHD · metabolic · HBV → early review

The Discharge Gate



Key 1: Documented Stool
(Proves lower GI tract patency)

Key 2: Documented Urine
(Proves renal function)

Key 3: Established Feeding
(Proves intake capability and glucose stability)

The Golden Rule: A newborn should NEVER be discharged until the passage of BOTH stool and urine is documented by clinical staff.

Synthesis: This is why Layla cannot go home at Hour 24. The 48-hour observation window is

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Primary clinical guidelines used in this deck: AAP Hospital Stay 2015 · AAP SIDS 2022 · Kemper CCHD 2011 · Lancet Breastfeeding Series · Jordan NHS (Front Pediatr 2024) · Kaiser EOS calculator · WHO Essential Newborn Care.