# Understanding Birth Emergencies

## Wild Ginger Birthkeeper Program

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# Understanding Birth Emergencies

- The most common birth emergencies
  - Overview
  - When they may happen
  - Likely interventions
  - Supporting people during emergencies
  - Post-emergency processing
  - Gaining more information
- General guidelines for hospital transfer
- Self-care

# Understanding Birth Emergencies

Today's topic covers material that participants may find emotionally challenging and/or may trigger responses to prior traumatic experiences.

Please do whatever you need to care for yourself. I encourage you to pause the recording or stop it altogether if you're feeling triggered and/or to talk with someone you trust about anything that comes up for you during the presentation.

# Birth emergencies and racism

Birth complications can happen to anyone. However, due to the stress of dealing with racism, centuries of medical neglect and abuse, and provider bias, people of color (and, in the US, especially Black people) may be at higher risk of complications.

When supporting someone through labor, it is especially important to advocate for them to be listened to, attended to, and respected if they belong to a group that has been neglected, marginalized, or abused by the medical system.

What helps you feel supported in tense situations?

# A few common birth emergencies

You will likely encounter these if you attend lots of births. They are UNLIKELY to happen during your own birth.

- Fetal distress
- Preeclampsia
- Infection
- Shoulder dystocia
- Neonatal transition issues
- Postpartum hemorrhage

# Understanding Birth Emergencies

Not covered: emergencies that happen before labor and after the immediate postpartum period

These are equally important and I encourage you to study up!

# A note on numbers

I am not including frequency data for most of the conditions discussed here. Numbers are based on diagnosis of conditions, but support for laboring people may be relevant even if the diagnosis has not been made.

# Emergency scenario: Non-reassuring fetal status

Sometimes referred to as “fetal distress” or “non-reassuring fetal heart tones (NRFHT)”

This term refers to times when the fetal heart rate is significantly out of the normal range.

May officially happen in about 15% of hospital labors in the US but numbers are based on diagnosis

# Non-reassuring fetal status

This can be caused by a number of factors related to fetal blood oxygenation :

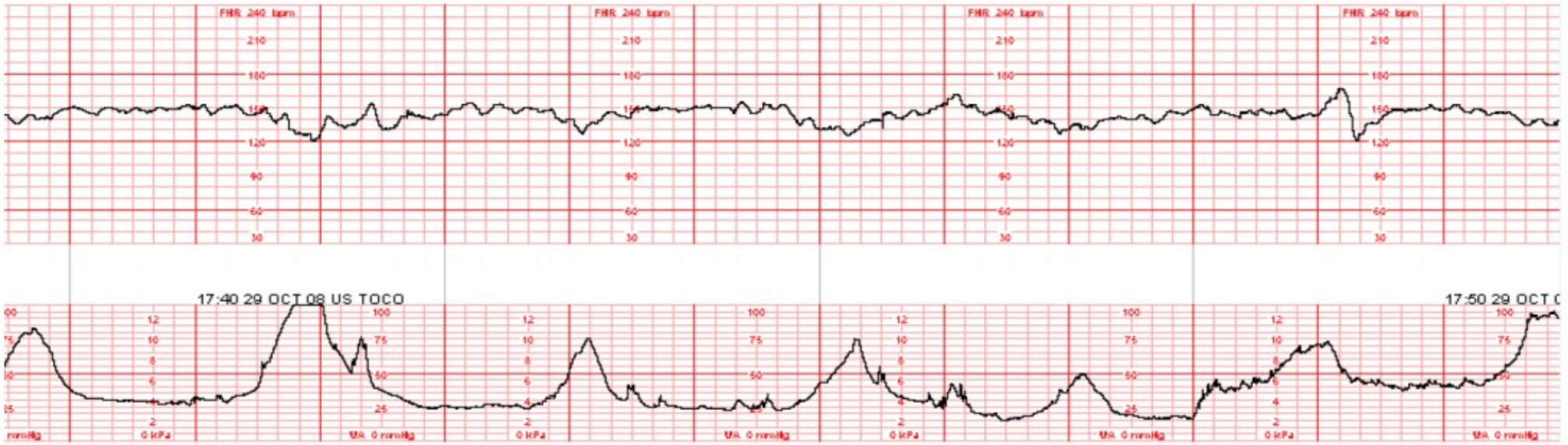
- Cord compression
- Infection
- Placental abruption
- Pitocin administration (fetus not tolerating contractions)
- Maternal conditions including anemia, CVD, hypertension
- Fetus small for gestational age

# Fetal Heart Rate (FHR): Monitoring

- FHR is monitored using various instruments:
  - Doppler of fetoscope (usually in home and birth center settings)
  - External cardiotocography (in hospital settings)
  - Internal monitor (in hospital, placed on baby's scalp)
- Monitoring can be intermittent or continuous
  - Intermittent = periods of listening interspersed with periods of not listening (doppler or cardiotocography)
  - Continuous = monitoring all the time (cardiotocography or internal monitor)

# Fetal Heart Rate (FHR): Normal activity

- Normal range is 110-160 BPM (about twice as fast as the average adult's heart rate)
- A healthy fetus has a baseline within normal range AND variability of 5-25 bpm from the baseline
- Decelerations are periods when the FHR is below baseline
- Accelerations are periods when the FHR is above baseline
- Some accelerations and decelerations are normal and acceptable to providers
  - Decels are very common during the beginning of contractions as the head is compressed (early decels)
  - Fetal movement or scalp stimulation during a vaginal exam can cause accelerations


FHR 240 bpm
210
180
150
120
90
60
30
17:40 29 OCT 08 US TOCO
17:50 29 OCT 0
12
10
8
6
4
2
0 kPa
100
75
50
25
UA 0 mmHg

# Fetal Heart Rate (FHR): Red flags

- Heart rate outside of normal activity may indicate that the fetus is not getting enough oxygen and is often called fetal distress or non-reassuring fetal status
  - Recurring decels (aside from normal early decels)
  - One long decel (a few minutes below normal range)
  - A *pattern* of decels at the end of contractions (late decels)
  - Baseline FHR above 160 (may be a symptom of infection)
  - Absence of variability
  - Baseline below 110
  - Decelerations below 100 bpm are cause for concern
  - Decleration below 60 bpm is considered an emergency
- Important to remember: fetal heart rate changes are not the problem, they are *indicators* of the problem

# Non-reassuring fetal status What to expect

- Minor decels will usually lead to increased monitoring
  - More frequent if monitoring is intermittent
  - More observation by staff if monitoring is continuous
- Expect the birth team to change the laboring person's position often
- In case of FHR baseline over 160 in a birth tub, laboring person may be asked to get out of the water
- Oxygen may be administered via face mask
- Pitocin may be discontinued if it's in use
- If delivery is imminent, expect a sense of urgency and pressure on the person in labor to push more often or harder
- Fetal distress when normal causes have been ruled out is an indication for emergency cesarean

# Non-reassuring fetal status: Support for laboring people

- Suggest changes in position (especially if the staff is not doing this)
  - Moving the person from side to side with monitoring during contractions can reveal if cord compression is the problem
  - Upright position (vs. lying on back) rules out aortic compression in the person in labor
- Assist in getting information and asking questions about status and options
- When everything is OK, discourage excessive monitor-watching by the laboring person and support team if it is distracting from labor coping

# Non-reassuring fetal status: resources

UCSF Guidelines for Fetal Monitoring in Labor and Delivery:

https://health.usf.edu/-/media/Files/Public-Health/Chiles-Center/FPQC/NNEPQIN_Fetal_Monitoring_Practice_Guidelines.ashx?la=en&hash=872E6B6B5CFA95B6AEB839765A37A4F14C613B55

FIGO consensus guidelines on intrapartum fetal monitoring: cardiotocography:

https://obgyn.onlinelibrary.wiley.com/doi/full/10.1016/j.ijgo.2015.06.020

http://www.ob-efm.com/

# Emergency scenario: Preeclampsia

Preeclampsia is a set of indicators that often precede eclampsia, which in turn is a life-threatening condition

- High blood pressure (always): systolic above 140 and/or diastolic above 90
- Protein in the urine (almost always)
- Kidney or liver dysfunction (less common if caught early)

Preeclampsia occurs in 2-8% of pregnancies worldwide. It is *on the* rise in the US.

It's usually evident in pregnancy (after 20 weeks) but may not become evident until labor/postpartum.

# Preeclampsia: what to expect

- Re-checking blood pressure often
- Urine testing
- IV Magnesium sufate or other hypotensive medication
- Possible transfer to hospital from an out-of-hospital setting
- "The only cure for (pre)eclampsia is delivery of the baby"
  - Increased urgency about timeline of delivery
  - C-section IF blood pressure continues to rise despite management (this is not a given, most cases respond to hypotensive medications)

# Preeclampsia: supporting laboring parents

- Insure that the laboring person and support team are informed about plans, risks, and procedures
- Encourage laboring person to lie on left side, close their eyes, and keep calm and quiet during blood pressure checks

# Preeclampsia: Follow-up care

- Regular blood pressure checks
- Calcium-rich diet
- Know signs of hypertension: swelling/edema, changes in vision, headache that does not respond to hydration/aspirin
- Antihypertensive herbs: dandelion leaf, hawthorn, nettles, nervines, etc.

# Emergency scenario: Shoulder dystocia

Shoulder dystocia happens when the baby's shoulder catches on the pubic bone as the head emerges.

- As the head descends, the shoulder becomes lodged on the pubic bone
- Diagnosis varies depending on provider
  - In hospital settings, it's usually considered dystocia if the body is not born within a minute following the head
  - Many midwives wait for the next contraction before becoming concerned about shoulder dystocia
- Most common sign = "turtling" or turtle sign: the head emerges and retracts, squishing the baby's face from below

# Shoulder dystocia: risks

These complications rarely happen as a result of shoulder dystocia-- the vast majority resolve without incident

- For baby:
  - brachial nerve damage
  - Fractured clavicle
  - Hypoxia
  - Cerebral palsy
- Laboring person:
  - Hemorrhage
  - Tear or episiotomy
  - Uterine rupture

# Shoulder dystocia: What to expect

- Changing positions
  - Knees to nipples
  - Hands and knees
  - Running start
- Maneuvers by providers:
  - Suprapubic pressure
  - Hands in the vagina in attempt to dislodge the shoulder and rotate the baby (various maneuvers)
- Possible difficulties with neonatal transition

# Shoulder dystocia: Supporting laboring people

- Encourage movement according to provider's instruction
  - Respond to "I can't" with encouragement
  - Provide specific instructions to help with movements
  - Describe why movements are necessary (e.g. "this position can help widen the pelvic opening")

# Emergency scenario: Neonatal transition trouble

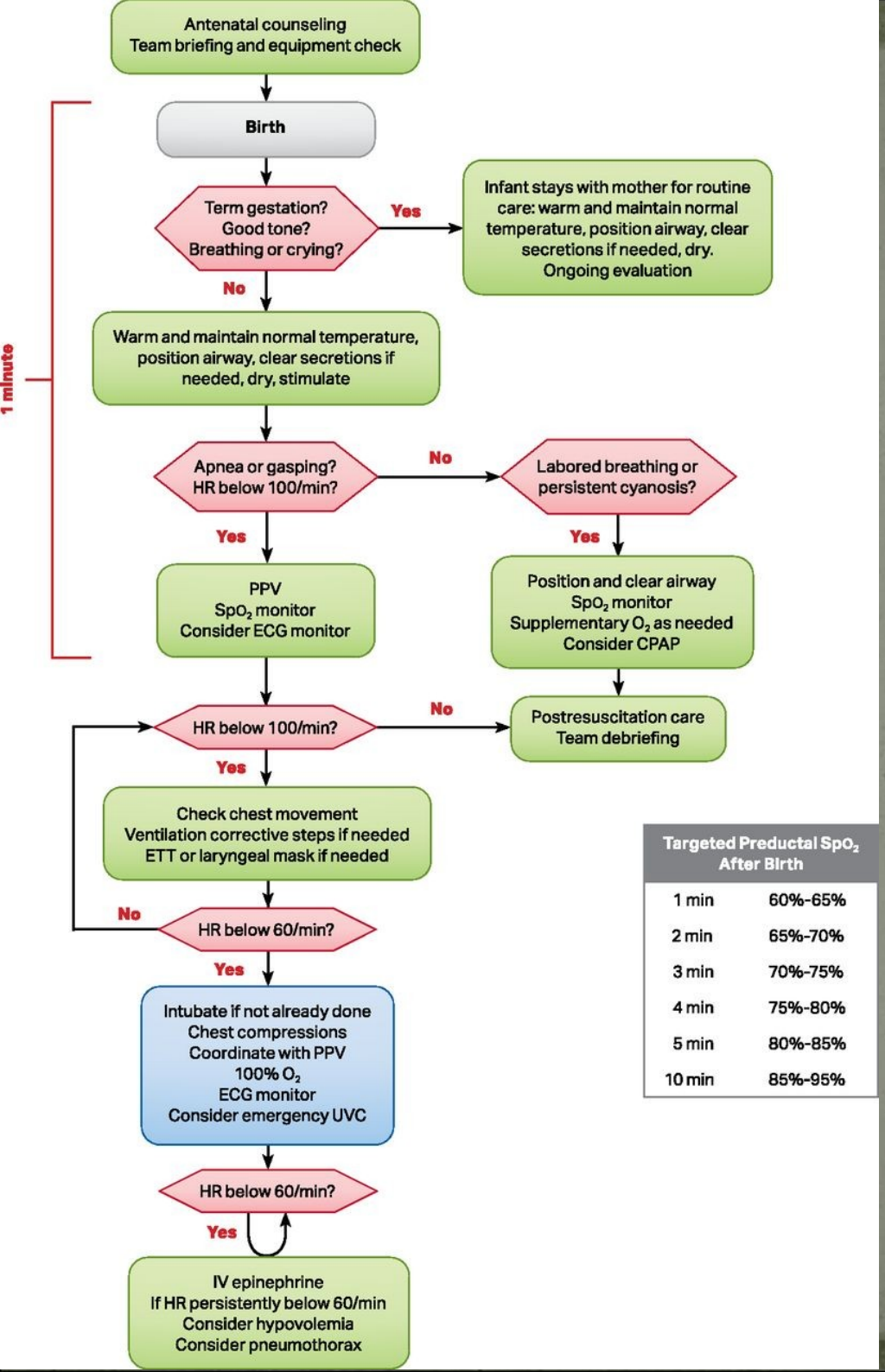
Neonatal transition depends on a series of factors

- Change in temperature stimulates first breaths
- First gasps of oxygenated air force fluid out of the lungs
- Closure of the ductus arteriosus, ductus venosus, and foramen ovale shift circulation from fetal to neonatal pattern
- Umbilical vessels constrict
- Muscle activity helps maintain neonatal temperature

# Neonatal resuscitation

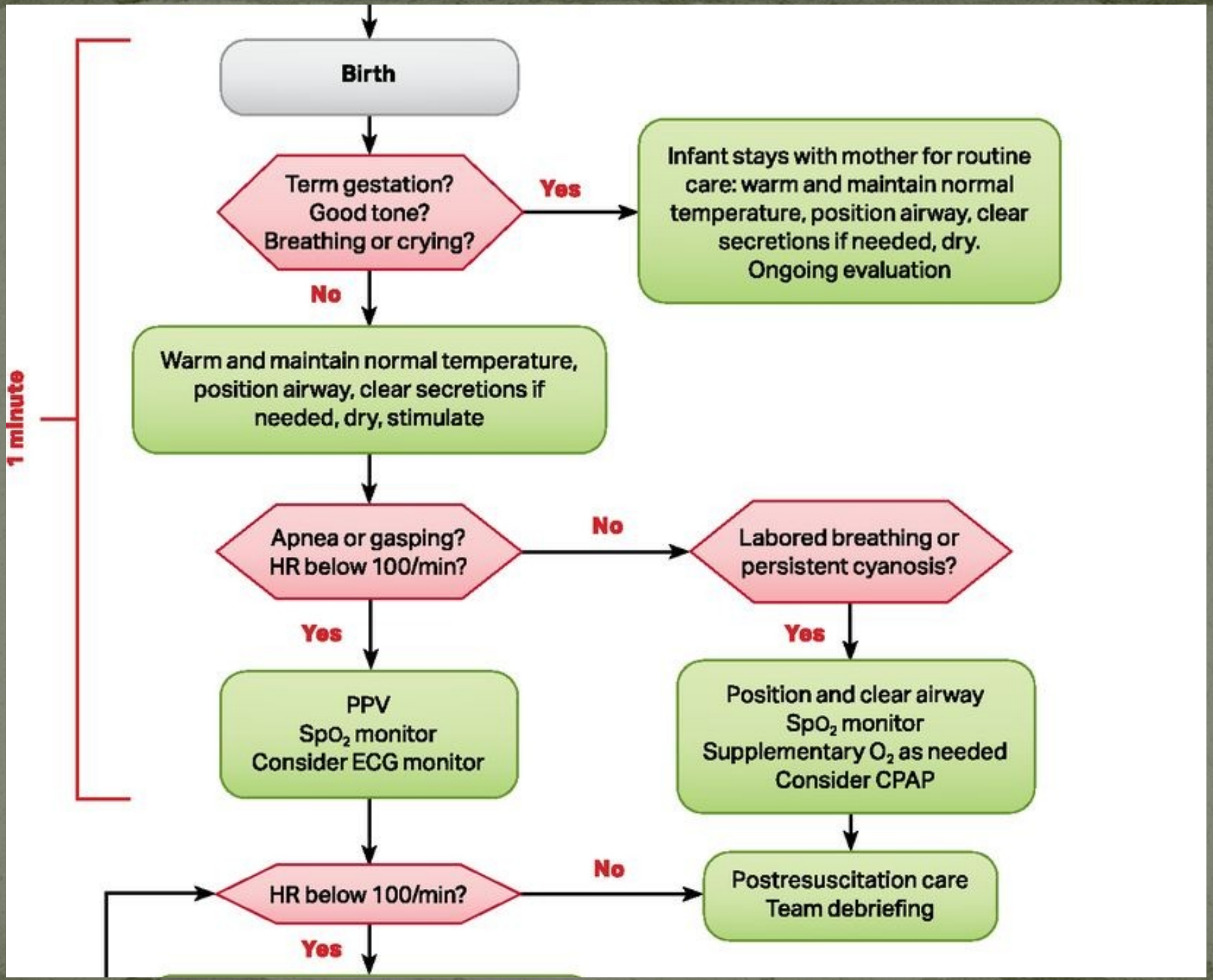
Resuscitation is an attempt to replicate the normal sequence of transition. It is NOT the same as CPR for an infant.

- Basic resuscitation is fairly common:
  - Stimulation and positioning (first 30 seconds)
  - Ambu bag (bag and mask)
  - Oxygen
- Advanced resuscitation is very rare for healthy term babies
  - Chest compressions
  - Epinepherine
  - Volume expansion




First minute: evaluation, stimulation, support for normal transition, PPV

After the first minute: continuous assessment and interventions


Birth
Term gestation?
Good tone?
Breathing or crying?
Yes
Infant stays with mother for routine care: warm and maintain normal temperature, position airway, clear secretions if needed, dry.
Ongoing evaluation
No
Warm and maintain normal temperature, position airway, clear secretions if needed, dry, stimulate
1 minute
Apnea or gasping?
HR below 100/min?
No
Labored breathing or persistent cyanosis?
Yes
Yes
PPV
SpO2 monitor
Consider ECG monitor
Position and clear airway
SpO2 monitor
Supplementary O2 as needed
Consider CPAP
HR below 100/min?
No
Postresuscitation care
Team debriefing
Yes

# Neonatal Ambu Bag (Bag Valve Mask)

*Self-inflating 250 cc*


FPnotebook.com

# Neonatal resuscitation: what to expect

- Sense of urgency
- Little to no communication about what is going on
- Hospital:
  - Lots of people coming into the room
  - Likely transfer of baby to NICU
- Out of hospital
  - Possible 911 call
  - Possible transfer to hospital

# Neonatal resuscitation: Support role

- Give information about what is happening (if you understand what's going on)
- Try to get information for the parent in a calm way
- Encourage the person to talk to their baby
- Advocate for delayed cord clamping
  - Many hospitals will not do this
  - In out-of-hospital settings, delayed clamping is essential
- Advocate for skin-to-skin contact as soon as possible (this assists healthy transition)

# Emergency scenario: Postpartum hemorrhage

Postpartum hemorrhage is excessive uterine bleeding. It is defined as blood loss greater than 500mL in the first 24 hours. Major PPH is loss of more than 1,000mL in 24 hours.

- Just under 3% of people who give birth experience hemorrhage
- Can happen immediately, after the placenta, or later in the postpartum period
- Often associated with elevated pulse, dizziness, or rapid breathing
- More likely in each successive birth

# Postpartum hemorrhage: causes

- Atonic uterus: the uterus does not contract sufficiently to cut off blood supply to capillaries (most common cause)
- Retained portion of the placenta
- Cervical tear
- Clotting disorder

# Postpartum hemorrhage: What to expect

- Active vs. expectant management
- Antihemorrhagic drugs
  - Pitocin
  - Cytotec / Misoprostol
  - Methergine / Methylergonovine
- Uterine massage
- IV fluids
- Blood transfusion in severe cases
- In cases of retained placental tissue, manual removal or D&C

# Postpartum hemorrhage: support role

- Encourage parent to feed the baby (releases oxytocin) or suggest nipple stimulation if not breast/chest feeding
- Provide plenty of fluid to drink, especially something with sugar (juice, gatorade, etc)
- Offer food as soon as possible
- Use extra caution when the person gets up to the bathroom

# Postpartum hemorrhage: Follow-up care

- Educate about postpartum red flags:
  - large volume of blood loss and/or large clots
  - pain in abdomen
  - rapid pulse, lightheadedness, fainting
- Educate about what do to if bleeding occurs at home: the three Bs
  - Breast/chestfeed the baby (or do nipple stimulation)
  - Empty the Bladder
  - Belly rub: pressure over the uterine fundus

# Postpartum hemorrhage: Follow-up care

- Nourishing diet to support blood building
  - Iron-rich foods: red meat, greens, beans, etc
  - Blood-building herbs: nettles, fennel, yellow dock, rehmannia, ashwagandha, etc
  - Rest and hydration
- Provide space for processing trauma if severe blood loss occurred

# Hospital transfers: general support guidelines

- Emergency transfers are chaotic. The environment changes rapidly from calm and quiet to loud and abrupt when paramedics arrive
  - Support laboring person by helping them to remain calm while the situation evolves
  - "No matter what's happening around you, focus on your breath"
- Assist with gathering personal items: ID, insurance card, clothing, shoes, etc
  - People planning out of hospital births are usually advised to have a hospital bag packed just in case
  - If it's an emergency transfer, someone else may need to bring needed items later

# Hospital transfers: general support guidelines

- People planning out-of-hospital births are often upset, angry, disappointed, or traumatized by transfer experiences
  - Remind that hospitals are there for emergencies that can't be dealt with at home/birth center
  - Counter negative perceptions of interventions that may be needed (e.g. pitocin, epidural, C-section)

# General support following birth emergencies

- Allow space for the person to process and tell their story
- Validate decisions they made during emergency situations
- Listen to expressions of trauma or mistrust in the provider's decisions
  - Support follow-up with the provider
  - Provide information
- Share your own perspective if it adds useful information

# Support for YOU

- During an emergency scenario, remember to breathe and ground yourself
- If feeling panicky and unsure what to do, step into the background to avoid getting in the way
- Debrief with providers if possible
- Support person to talk to
  - Maintain client privacy
  - Recount the story
  - Express feelings of empowerment, helplessness, fear, etc
- Release tension and energy
  - Physical movement
  - Singing/shouting/vocalizing
- Education
  - Use the experience as a learning point

# Resources for further learning

Neonatal resuscitation program:

https://services.aap.org/en/learning/neonatal-resuscitation-program/

BEST (Birth Emergency Skills Training)

http://birthemergency.com/

Hesparian Foundation

https://store.hesperian.org/prod/A_Book_for_Midwives.html

Postpartum hemorrhage (Children's Hosp. of Philadelphia):

https://www.chop.edu/conditions-diseases/postpartum-hemorrhage

Preeclampsia (World Health Organization):

http://apps.who.int/iris/bitstream/handle/10665/44703/9789241548335_eng.pdf;jsessionid=2E12C05568A0A11347FD5E7F21AF84BA?sequence=1