

Why we are  
no longer  
PALS

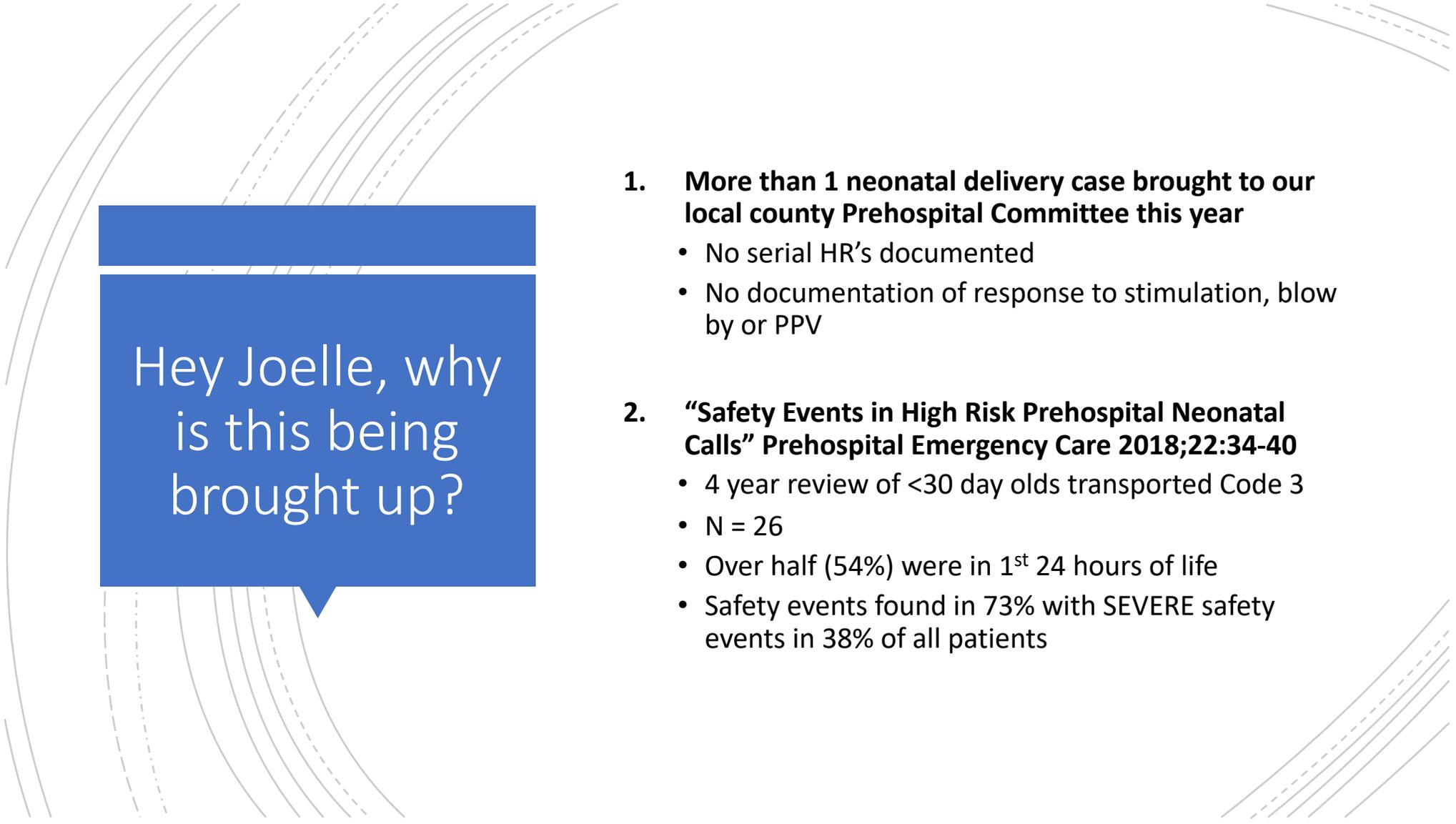
**J. Joelle Donofrio, DO, FAAP,  
FACEP, FAEMS**

Associate Medical Director

San Diego Fire-Rescue

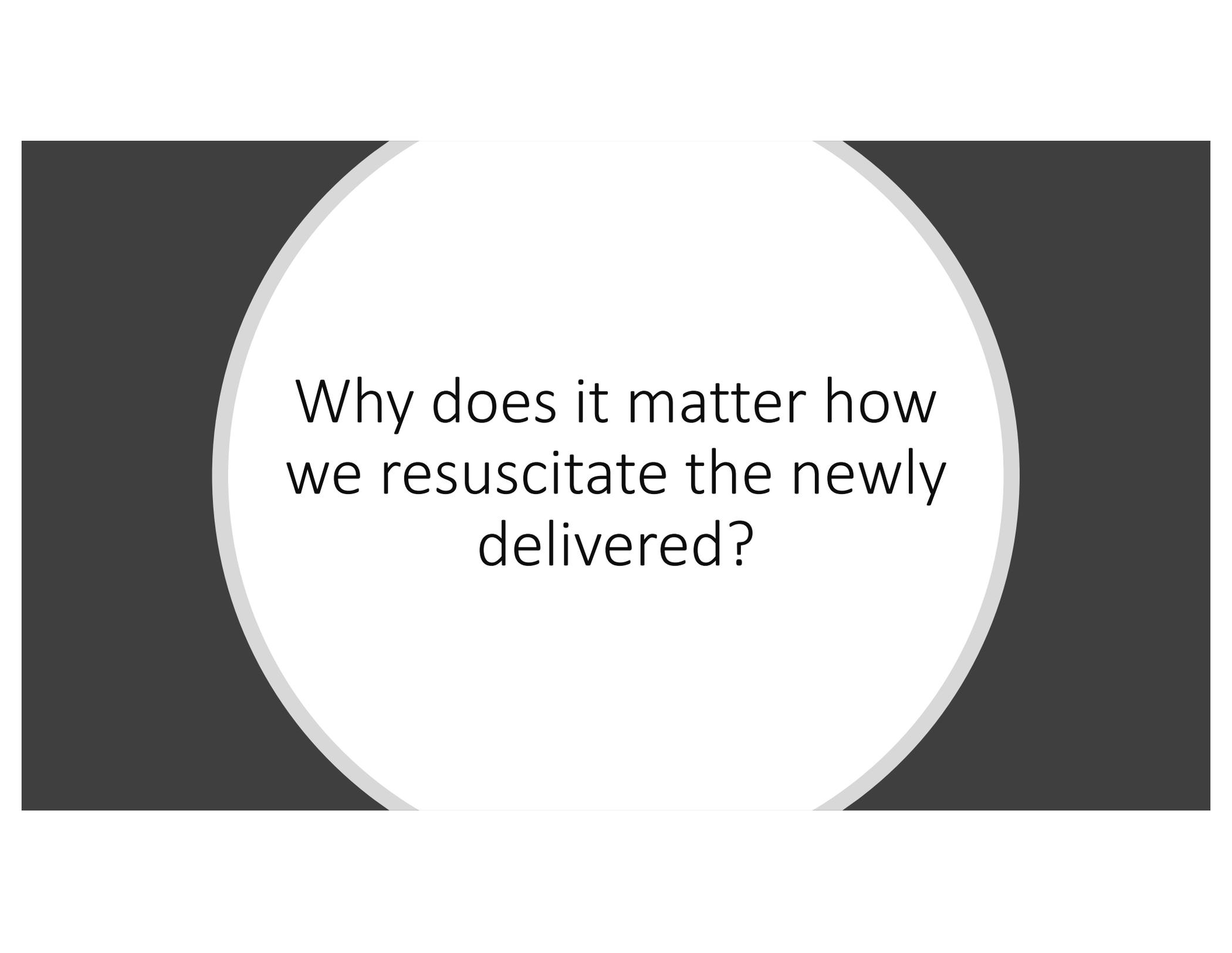
EMS Medical Director Rady  
Children's Hospital of San Diego

Assistant Professor, University of  
California, San Diego



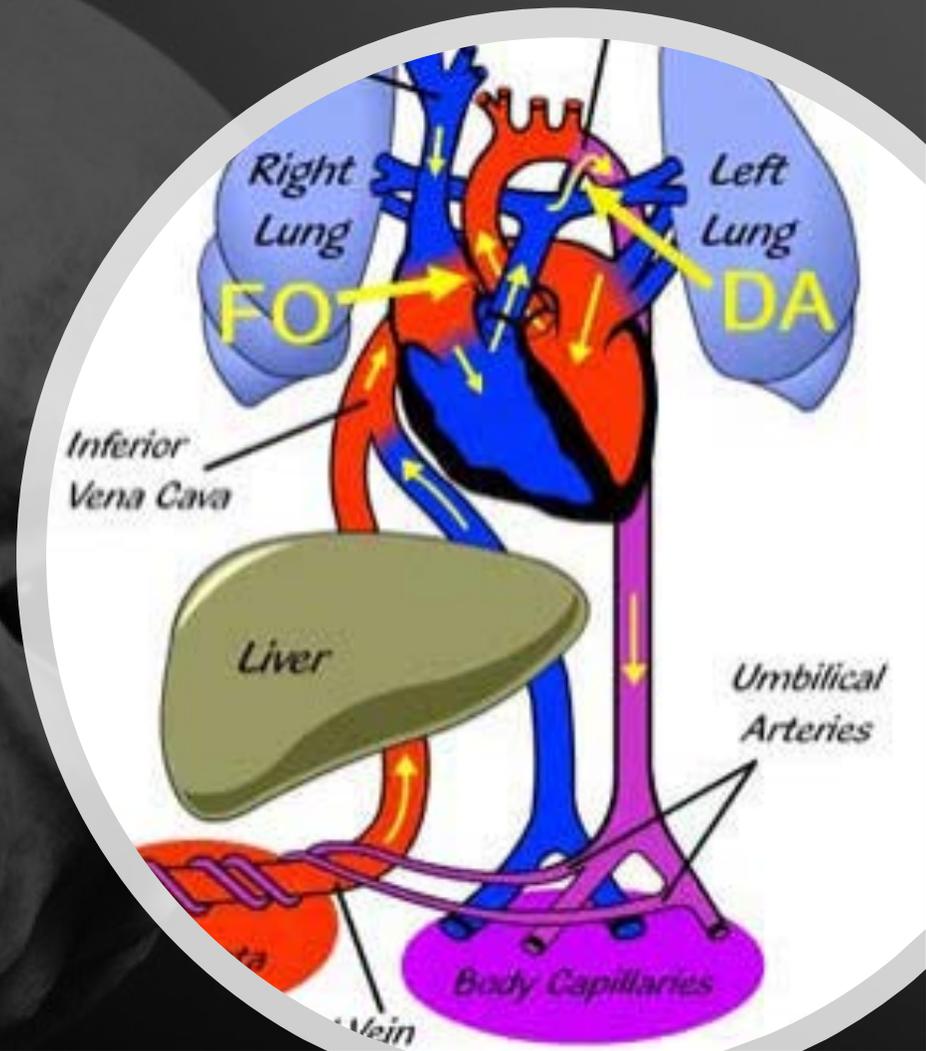
Hey Joelle, why  
is this being  
brought up?

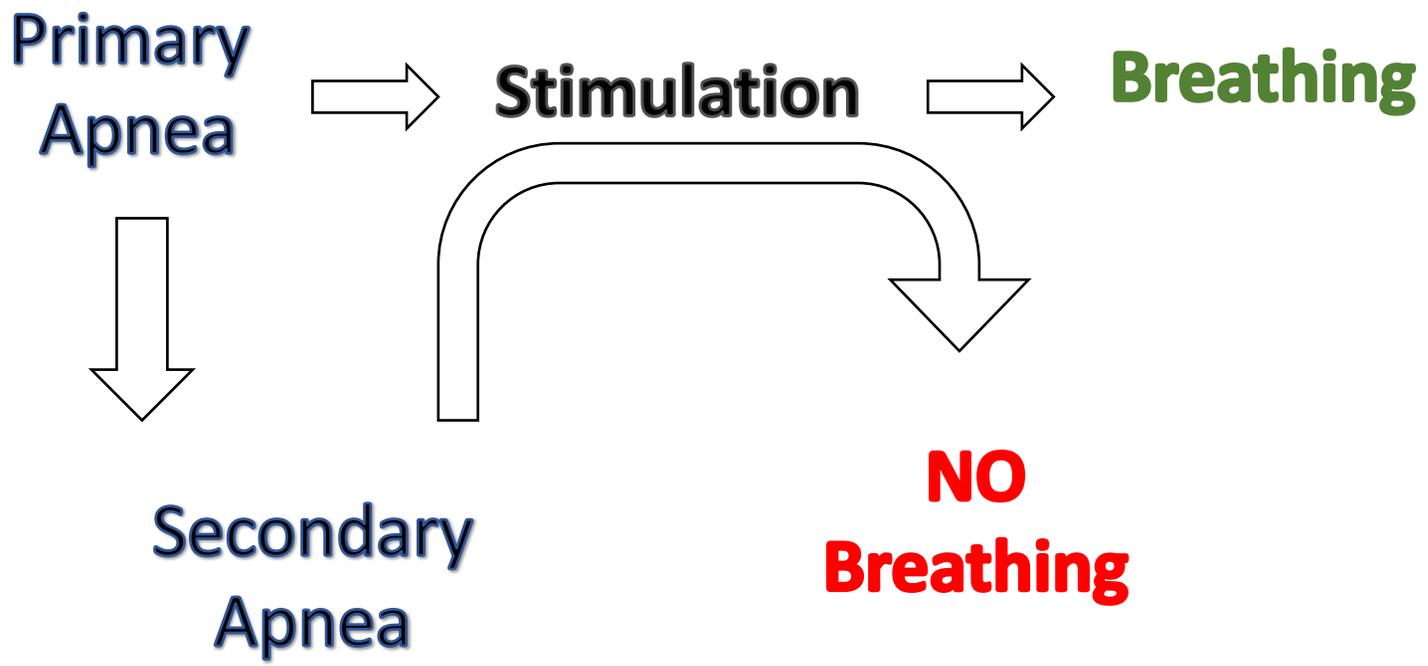
1. **More than 1 neonatal delivery case brought to our local county Prehospital Committee this year**
  - No serial HR's documented
  - No documentation of response to stimulation, blow by or PPV
2. **"Safety Events in High Risk Prehospital Neonatal Calls" Prehospital Emergency Care 2018;22:34-40**
  - 4 year review of <30 day olds transported Code 3
  - N = 26
  - Over half (54%) were in 1<sup>st</sup> 24 hours of life
  - Safety events found in 73% with SEVERE safety events in 38% of all patients



Why does it matter how  
we resuscitate the newly  
delivered?

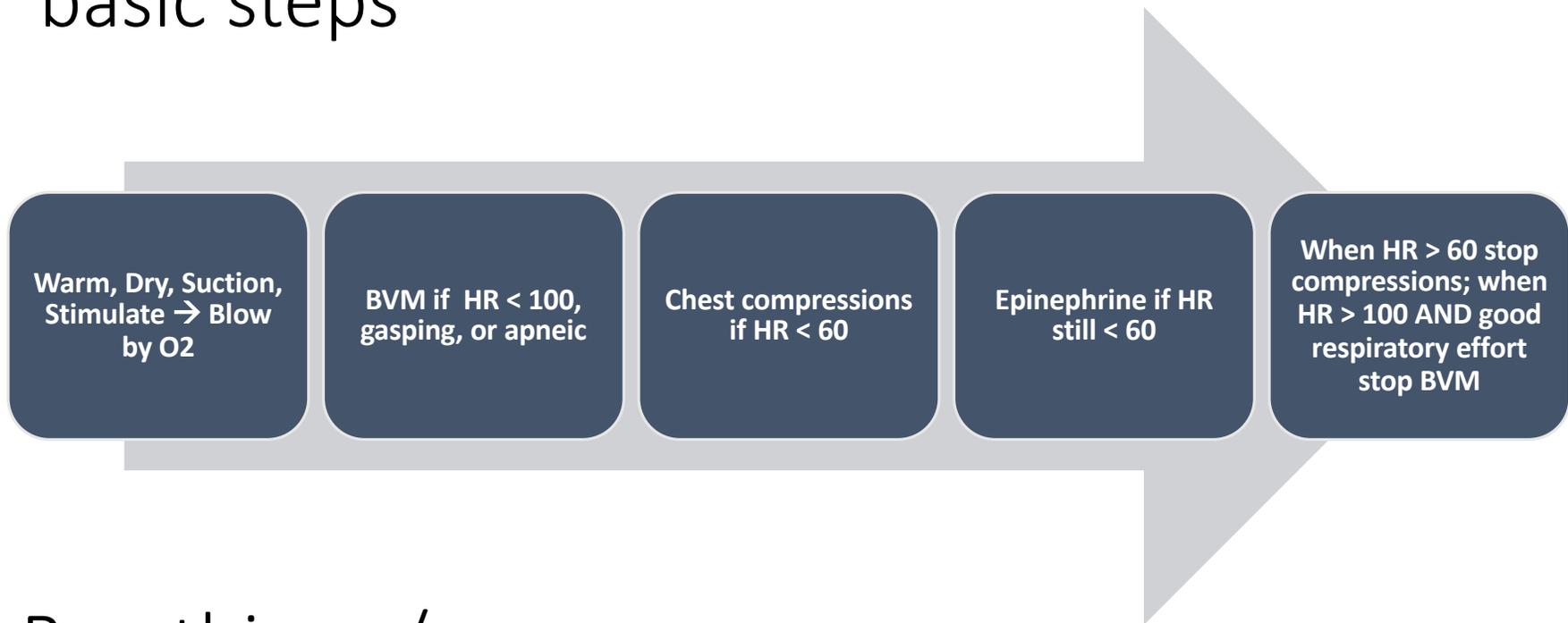
The newly delivered....





**RESUSCITATE  
EARLY FOR APNEA**

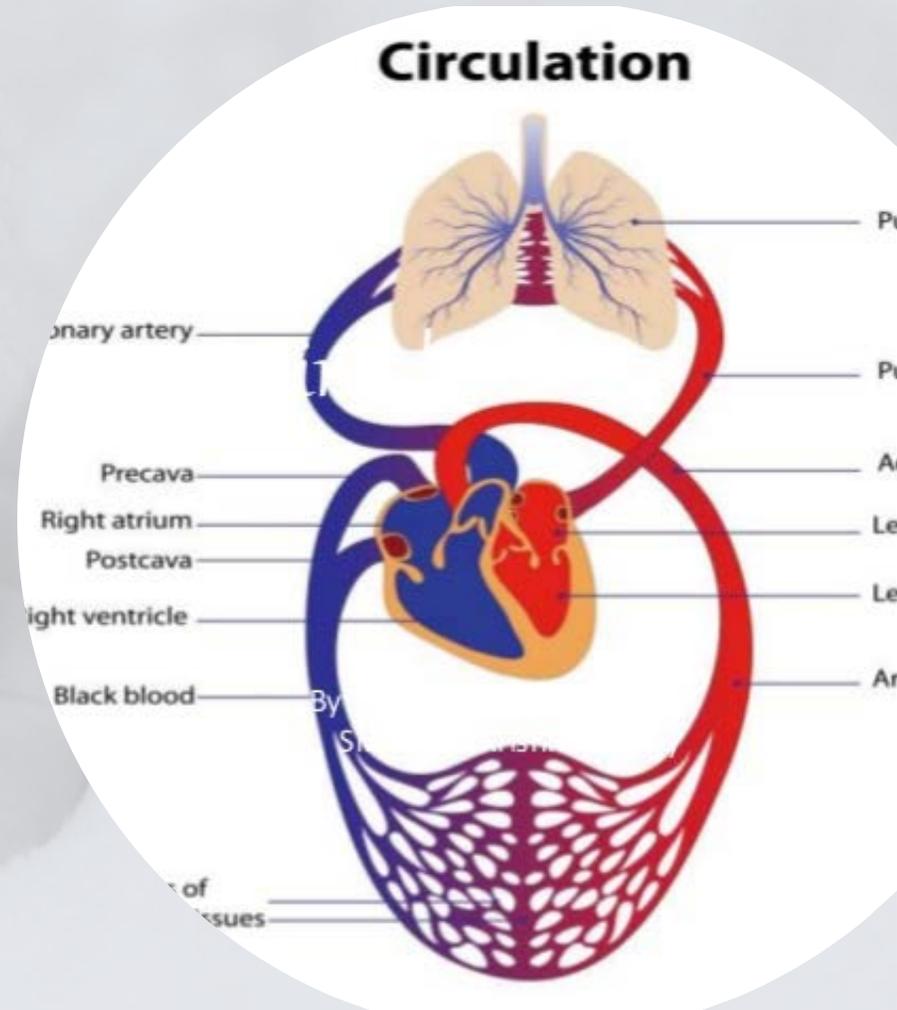
# Resuscitation of the newly delivered ... basic steps



Breathing y/n  
HR thresholds 100 and 60

As opposed to the no longer newly delivered (aka air breathers)...

- PALS
- Name that dysrhythmia
- Shockable, not shockable?
- Different medications





Hmmm...

Let's take a deeper look

Cardiac Origin

- S-127. Dysrhythmias
- S-129. Envenomation Injuries
- S-130. Environmental Exposure
- S-131. Hemodialysis Patient
- S-132. Decompression Illness / Diving / Altitude Related Incidents
- S-133. Obstetrical Emergencies

(Non-Traumatic)

- S-162. Allergic Reaction / Anaphylaxis
- S-163. Dysrhythmias
- S-164. Envenomation Injuries
- S-165. Poisoning / Overdose
- S-166. Newborn Deliveries
- S-167. Respiratory Distress
- S-168. Shock
- S-169. Trauma
- S-170. Burns
- S-172. ALTE (Apparent Life-Threatening Event)/BRUE (Brief Resolved Unexplained Event)
- S-173. Pain Management

**Protocols completely separated**

**Placed away from mom and in pediatrics**

# Our Local Protocols

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G-08. Hyperkalemia  
G-09. Hyperthermia / Heat Illness  
G-10. Hypothermia  
G-11. Infection Control and Screening Criteria  
G-12. OB / GYN Emergencies  
G-13. Scope of Practice - Local Optional  
G-14. Smoke Inhalation / CO Monitoring  
G-15. Transport Guidelines  
G-16. Trauma Patient Care  
G-17. Trauma Patient Criteria  
G-18. TxA - Tranexamic Acid

P-02. Anaphylaxis / Allergic Reaction  
P-03. Altered Level of Consciousness  
P-04. Brief Resolved Unexplained Event  
P-05. Bradycardia  
P-06. Neonatal Resuscitation  
P-07. Pain Management  
P-08. Pediatric Drug Chart  
P-09. Poisoning / Ingestion / Overdose  
P-10. Pulseless Arrest: Asystole / PEA  
P-11. Pulseless Arrest: V-Fib / V-Tach  
P-12. Respiratory Depression or Apnea (Suspected OD)

More CA  
protocols

PTP10. Submersion Incident

PTP11. Isolated Extremity Fracture / Dislocation

PTP12. Anaphylaxis / Allergic Reaction

PTP13. Post-Arrest Stabilization

PTP14. Neonatal Resuscitation - Recent Delivery

PTP15. Head Trauma / TBI Management

PTP16. Hemorrhage Control / Tourniquet

PTP17. Hemorrhage Control / Tourniquet

PTP18. Peds Drug Card

PTP19. Peds Code Cards

Pediatric Vital Signs

APGAR Chart

ATP20. Seizures of Unknown Etiology

ATP21. Multi-Systems Trauma

ATP22. Chest Trauma

ATP23. Head Trauma / TBI Management

ATP24. Acute Dystonic Reaction due to Phenothiazine Medication

ATP25. Obstetrics

ATP26. Other Situations

ATP27. Nasotracheal Intubation

ATP28. Ingestion - Conscious Patient

ATP29. Dead on Arrival - Obvious and Apparent

# Nearby States

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3-3. Allergic Reaction and Anaphylaxis

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3-4. Bradycardia

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3-5. Hyperglycemia

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3-6. Hypoglycemia

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3-7. Nausea and/or Vomiting (>2 y/o)

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3-8. Neonatal Resuscitation

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3-9. Overdose / Toxic Exposure

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3-10. Pain Management

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3-11. Procedural Sedation

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3-12. Seizures

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3-13. Shock / Hypoperfusion

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2-11. Carbon Monoxide Exposure  
- Suspected

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2-12. Cardiogenic Shock

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2-13. Chest Trauma

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2-14. Childbirth

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2-15. COPD Exacerbation/Bronchospasm

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2-16. Crush Injuries

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2-17. Eye Injuries and Exposures

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2-18. Excited Delirium

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2-19. Heat Emergencies

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2-20. Hemorrhage Control

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2-21. Hyperglycemia

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# East Coast

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# NAEMSO Model Guidelines



OB/Gyn

## NAEMSO Model Guidelines

G-01. Childbirth

G-02. Eclampsia/Pre-Eclampsia

G-03. Obstetrical and  
Gynecological Conditions



Pediatric

## NAEMSO Model Guidelines

P-01. Brief Resolved Unexplained Event  
(BRUE)

P-02. Pediatric Respiratory Distress  
(Bronchiolitis)

P-03. Pediatric Respiratory Distress (Croup)

P-04. Neonatal Resuscitation

**I think you  
are getting  
the point**

AO 1. Childbirth / Labor

AO 2. Newly Born

AO 3. Obstetrical Emergency

1210-P. Cardiac Arrest

1212-P. Cardiac Dysrhythmia - Bradycardia

1213-P. Cardiac Dysrhythmia - Tachycardia

1215-P. Childbirth Mother

1216-P. Newborn/Neonatal Resuscitation

1217-P. Pregnancy Complication

1219-P. Allergy

1220-P. Burns

1221-P. Electrocutation

1222-P. Hyperthermia (Environmental)

1223-P. Hypothermia / Cold Injury

1224-P. Stings / Venomous Bites

Updated November 21, 2018

540. Obstetric Complications

543. Neonate Resuscitation

Very few had baby with mom



Started looking  
through the literature



Obstetrics

Neonatology

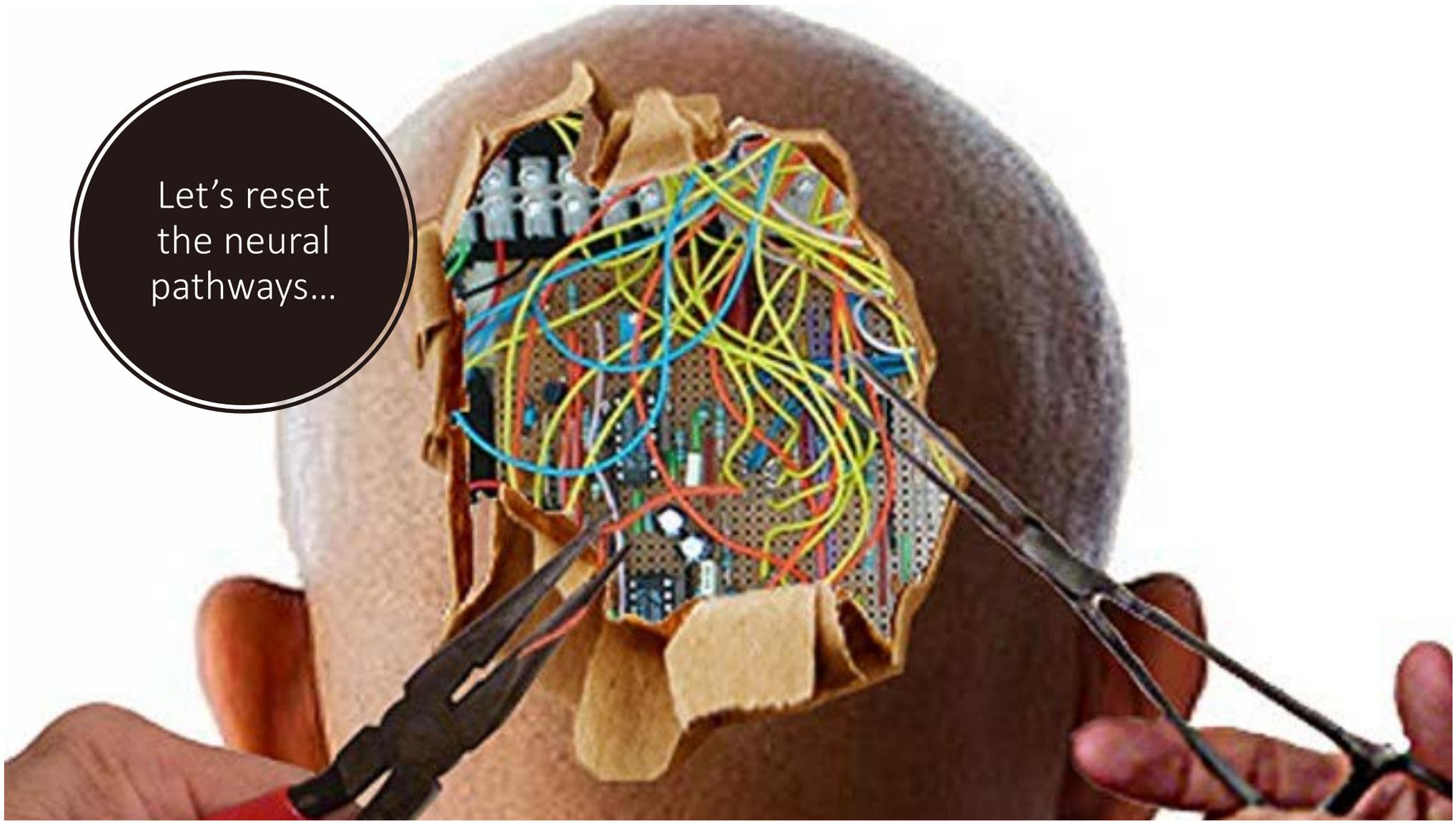
Take away: 2 distinct specialties  
Each covered SEPARATELY



## Reality of EMS and Emergency Department

- One patient becomes two
- Unique high risk, low frequency events can occur at time of delivery... for mom and baby
- You are the obstetrician and the neonatologist

Let's reset  
the neural  
pathways...





Special scary scenarios that occur  
only at birth

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Educate and train together  
Keep the protocols TOGETHER



Keep Mom and Baby Together

Thank you  
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