



Emergency Medical Services
EMSC
for Children



Nevada Chapter

American Academy of Pediatrics
DEDICATED TO THE HEALTH OF ALL CHILDREN®



Field Delivery

THE ABC'S OF NEWBORN RESUSCITATION,
STABILIZATION AND TRANSPORT

FIELD DELIVERY- the ABCS of Newborn

Resuscitation and Stabilization.

- ▶ Lloyd Jensen MD, FAAP, CHSE
 - ▶ Medical Director PNTT Sunrise Children's Hospital
 - ▶ Clinical Professor UNLV SOM
- ▶ Jesse Francomano, BSN,RN,CCRN,C-NPT
 - ▶ Charge Nurse Pediatric Neonatal Transport Team
- ▶ Michelle Oddi
 - ▶ Director Medical Education
- ▶ Misc Susie and or Troy

Situation- Out of Hospital Deliveries

- ▶ 2017 in Nevada 512 out of hospital deliveries (1.4% of total)
 - ▶ Increasing number of out of hospital birth occurring during COVID.
 - ▶ 9% home births brought emergently to the hospital-
 - ▶ Death rates double.
 - ▶ Preventable conditions.
 - ▶ Sunrise 1 to 4/ month
-
- ▶ Low incidence but high risk transport

EMS training requirements

- ▶ Frequent training in ALS adults
- ▶ SNHD 4 hours of CE/cycle in Pediatrics/Obstetrics
- ▶ None in Newborn
- ▶ Pediatric protocols -> Newborns

- ▶ Resuscitation, Stabilization and Transport of Newborn is Significantly different than a pediatric patient.

Webinars and Simulation

- ▶ EMS providers believe simulators provide a relevant and realistic experience
- ▶ Interactive and engaging content with ease of use are important qualities of simulations
- ▶ Low Dose High Frequency simulation training shown to improve providers skill and knowledge in resuscitation and stabilization of the newborn.

Proposal

- ▶ Prerecorded webinar combined with LDHF training that is engaging and east to use in newborn procedures can allow EMS providers to obtain relevant training that is cognitive and didactic in newborn resuscitation, stabilization and transport
- ▶ 30 min Webinar
- ▶ Skill check of by training partner
 - ▶ PPV
 - ▶ Advance Airway
 - ▶ Chest Compressions
 - ▶ IV and I/O, Medications
- ▶ Survey



Emergency Medical Services
EMSC
for Children



Nevada Chapter

American Academy of Pediatrics
DEDICATED TO THE HEALTH OF ALL CHILDREN®



Field Delivery

THE ABC'S OF NEWBORN RESUSCITATION,
STABILIZATION AND TRANSPORT

Objectives

- ▶ Prepare for Newborn Resuscitation and Stabilization in the Field.
- ▶ Develop structure for responding to newborn emergencies.
- ▶ Identify and address resuscitation, stabilization and transport of newborn.
- ▶ Improve skill set for PPV, chest compressions, advanced airway, I/O placement and medications for newborn

Introduction case

- ▶ Home delivery- lots of options
- ▶ Angel
- ▶ The Kingman home delivery
- ▶ The Centennial Hills ED home delivery
- ▶ The recent home delivery with sweet beginnings
- ▶ MGM delivery

ABCs

- ▶ A Anticipate and Plan. Airway
 - ▶ Green-stable
 - ▶ Yellow-risk
 - ▶ Red-critical
- ▶ B Breathing,
- ▶ C Circulation
- ▶ D Drugs
- ▶ E Environmental- temp
- ▶ F Foot-
- ▶ G Glucose
- ▶ H Hit the Road

Anticipate

- ▶ Prebrief
- ▶ Assume **term/late preterm-green >2kg** to start.
- ▶ **If 2kg to 1 kg yellow 1/2 the doses.**
- ▶ **If < 1kg Red 1/2 the dose again**

▶ Airway	3.5 ETT LMA	3.0 LMA	2.5
▶ Drugs	Green	Yellow	Red
▶ Epi IV	0.4	0.2	0.1
▶ Epi ETT	2.0	1.0	0.5
▶ NS Bolus	30	15	7.5
▶ D10W	8	4	2
▶ Dextro gel	2.0	1.0	0.5

- ▶ Warm
- ▶ PADS
- ▶ Miscellaneous

Drugs

Green->Yellow->Red

- ▶ **Epinephrine IV 0.1 mg/ml** - 0.1 ml to 0.3 ml/kg - .01 mg to .03 mg/kg
 - ▶ **Green** > 2 kg 0.04 mg 0.4 ml Dose from 1670 gm to 4000 gm
 - ▶ **Yellow** 1-2 kg 0.02 mg 0.2 ml Dose from 667 gm to 2000 gm
 - ▶ **Red** <1 kg 0.01 mg 0.1 ml Dose from 333 gm to 1000 gm
- ▶ **Epinephrine ETT 0.1 mg/ml** 0.5 ml to 1.0 ml/kg - .05 mg to 0.1 mg/kg
 - ▶ **Green** >2 kg 0.2 mg 2.0 ml Dose from 2000 gm to 4000 gm
 - ▶ **Yellow** 1-2 kg 0.1 mg 1.0 ml Dose from 1000 gm to 2000 gm
 - ▶ **Red** <1 kg 0.05mg 0.5 ml Dose from 500 gm to 1000 gm
- ▶ **Dextrose buccal 40%** 0.2 gm/kg = 0.5 ml/kg/dose
 - ▶ **Green** >2 kg 2.0 ml Dose for 4000 gm
 - ▶ **Yellow** 1-2 kg 1.0 ml Dose for 2000 gm
 - ▶ **Red** <1 kg 0.5 ml Dose for 1000 gm
- ▶ **D10W** 2 ml/kg IV over 5 to 10 min
 - ▶ **Green** >2 kg 8 ml Dose for 4000 gm
 - ▶ **Yellow** 1-2 kg 4 ml Dose for 2000 gm
 - ▶ **Red** <1 kg 2 ml Dose for 1000 gm
- ▶ **NS IV** 10 ml/kg IV over 5 to 10 min
 - ▶ **Green** >2 kg 30 ml Dose for 3000 gm
 - ▶ **Yellow** 1-2 kg 15 ml Dose for 1500 gm
 - ▶ **Red** <1 kg 7.5 ml Dose for 750 gm

Foot

- ▶ Gestation Fender growth chart 50%
 - ▶ 27 wk 1000 gm
 - ▶ 33 wk 2000 gm
 - ▶ 37 wk 3000 gm
- ▶ Heel to toe South Africa-Smith, Pakistan-Saleem
 - ▶ 27 wk 4.5 cm 5 cm
 - ▶ 33 wk 6.8 6.5
 - ▶ 37 wk 7.2 7.8
- ▶ Proposed
 - ▶ Green 33 week + >2kg > 7cm
 - ▶ Yellow 27 to 33 wk 1-2kg 5-7cm
 - ▶ Red <27 wk <1kg <5 cm

Didactic skill pass

- ▶ Warm, Dry, Stim
- ▶ PPV
- ▶ Advanced Airway
- ▶ Chest Compressions
- ▶ I/O IV
- ▶ Med
- ▶ Pass Off at the Station

Roll Out

- ▶ EMS version
 - ▶ Mtview paramedics
 - ▶ Webinar
 - ▶ Vegas to EMS
 - ▶ Nevada to all EMS
 - ▶ CE units
 - ▶ View 30 min webinar-register on HCA platform
 - ▶ Hands on
 - ▶ PPV 20 repetitions
 - ▶ Chest compression- 20 repetitions
 - ▶ LMA/intubation - ??
 - ▶ Drug doses worksheet
 - ▶ I/O/IV check list
 - ▶ Receive credit
- ▶ Phase 1 5 to 10 agencies with Neonatlie Live

Budget draft for phase 1

▶ Course development		\$ 500
▶ Material printing		1000
▶ Simulators NeoNatalie Live \$800		10000
▶ 10 agencies participating 10 x 800		
▶ Data Gathering		500
▶ Incentive to agency	10x 200	2000
▶ Total		\$12,000