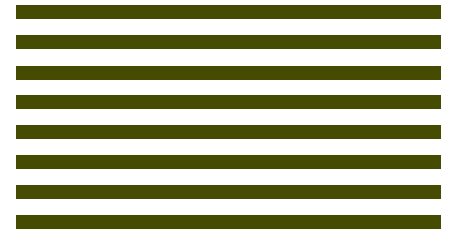


# SOUTH SHORE SIMFLUENCER



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*Dr. Yanes, Dr. Wiedemann, RN Rochelle, RN Julie, and RN Kelly hard at work resuscitating a simulated pediatric patient*

## **WELCOME TO THE SSUH SIMFLUENCER!**

Welcome to The SSUH Simfluencer! This monthly newsletter will serve as an educational tool for all faculty, staff, and learners in the emergency department (ED) at South Shore University Hospital. We will go over lessons learned, latent safety threats, and review best practices for managing critically ill patients in the ED.

This month, we will discuss takeaways from two of our simulated pediatric cardiac arrest resuscitations that took place on 6/20 and 8/3, as well as review the PALS bradycardia algorithm, and locate important equipment within the ED.

We would like to personally thank every team member who took the time to participate and make this simulation initiative a success! We are looking forward to rolling out additional simulated resuscitations in the ED.

## **CHILDREN ARE NOT JUST SMALL ADULTS...**

We begin by reviewing pediatric advanced life support (PALS)!

## **LOCATION, LOCATION, LOCATION!**

Where is the pediatric equipment located ?

## **TAKEAWAYS**

We will review important lessons learned from our first two simulated pediatric resuscitations



Pediatric Bradycardia With a Pulse Algorithm

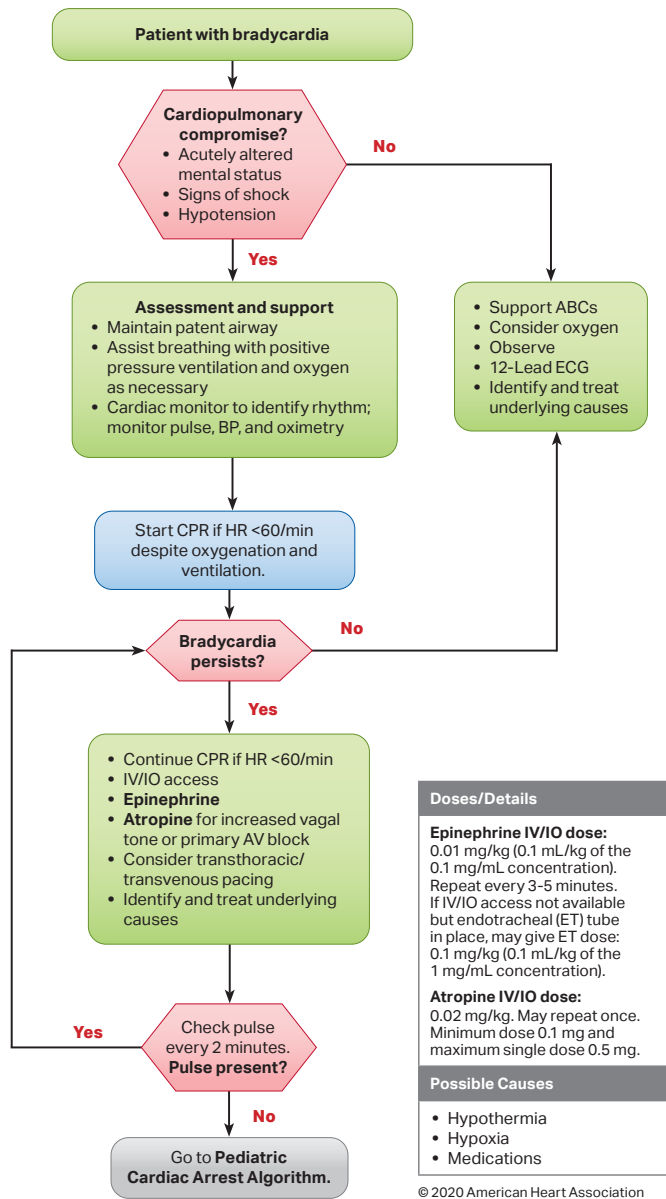


Figure 1- PALS algorithm

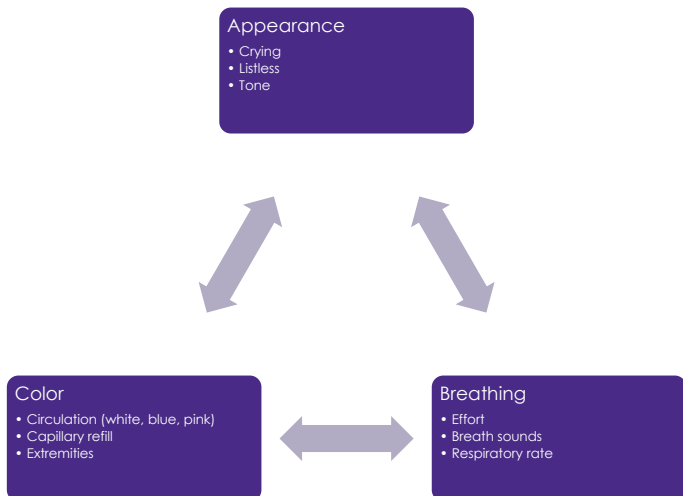
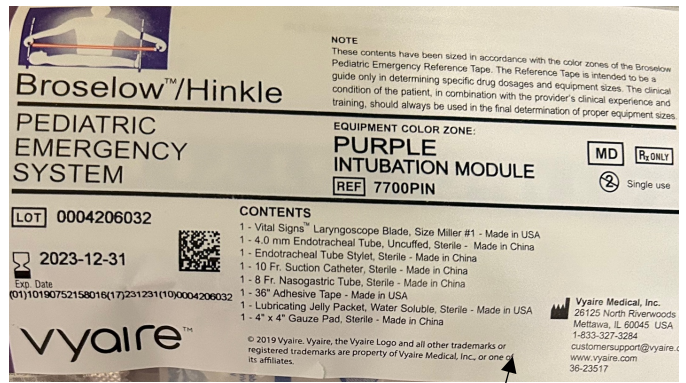


Figure 2- Pediatric triangle. Use this framework to assess your pediatric patients for severity of illness.

PALS REVIEW

- Pulse check- brachial or femoral
- **If HR is <60 with signs of poor perfusion- this is an indication to start chest compressions!!!**
- If patient is not intubated- you must coordinate chest compressions and ventilations
- Ratio of chest compressions:ventilations
  - 15:2 for 2 rescuers
  - 30:2 for 1 rescuer
- If patient is intubated
  - Compressions at rate of 100-120bpm
  - Ventilation rate
    - 0-teen: 20 breaths/min (1 breath every 3 seconds)
    - Teen-adult: 12 breaths/min (1 breath every 5 seconds)
- Intraosseous access is preferred
  - Sizing
    - pink: 3-39kg
    - blue: >40kg
    - yellow: Humerus or excessive tissue
- Locations:
  - Proximal humerus, proximal tibia, distal tibia, femoral, iliac crest
- Medications
  - Bradycardia with pulse
    - Atropine
    - Epinephrine
  - Resources to assist with dosing
    - Broselow tape
    - Pediatric code calculator (On Northwell connect)
    - PediSTAT
    - Laminated cards on code card

# WHERE IS ALL THE PEDIATRIC EQUIPMENT?



Contents of prepackaged airway equipment in pediatric code cart



Pediatric code cart, with Broselow tape located on wall to right

## TRAUMA CLOSET- EXTRA IO, AIRWAY, SURGICAL SUPPLIES

01

All pediatric equipment is in **GREEN** bins

02

Peds code cart contains pre-packaged airway supplies (although this is going to be phased out)

03

C-collars located in top row of green bins in trauma closet

04

Any additional airway supplies will be in green bins in trauma closet (Jet ventilator located on TOP shelf)



Green bins located in trauma closet contain PEDIATRIC equipment

# TAKEAWAYS

- Team Dynamics
  - Assign dedicated roles prior to patient arrival
    - Team leader
    - Scribe
    - Primary nurse
    - Secondary nurse
    - **Runner**
      - **This was identified as an essential role!**
      - **Role: Retrieve equipment, medications necessary for peds resuscitations**
    - RT
    - Airway
    - Procedures
  - Team leader at foot of bed
  - **AT LEAST 2** providers should be called to respond to code white- "team leader" and "airway"
  - Closed loop communication
    - **Count your compressions out loud** so the person bagging knows when to ventilate
    - Repeat when medications are administered
    - Summarize case and verbalize
- PALS review
  - **Start CPR with pulse <60 and signs of poor perfusion**
  - Reversible causes for cardiac arrest in pediatric patients
    - Hypoxia
    - Hypovolemia
    - Hypoglycemia
    - Toxins
    - Trauma
  - **Vascular access- IO!**
- Preparation
  - **Practice finding equipment/resources/meds within the ED**
  - Prepare equipment ahead of time if you receive a prenotification
    - Airway supplies
    - Vascular access
    - IO
    - Broselow tape
  - Review resources available
    - Broselow tape- gives equipment sizes, medications, and defibrillation/cardioversion dosing
    - Pedistat
    - Laminated paper in code binder
    - Pediatric code calculator
- Airway review
  - **Bring multiple sizes of equipment to airway**
  - ETT size
    - CUFFED PREFERRED!
    - Age/4 +4 for uncuffed
    - Age/4 +3.5 for cuffed
    - Depth = 3x size of ETT
  - Laryngoscope
    - 1 for infants
    - 2 after age 2
    - 3 after 3<sup>rd</sup> grade
    - 4 larger adults
  - Tidal volume- 8-10cc/kg



*Our pediatric patient*



*Dr. Jennings, RN Rochelle, RN Alexis, and RT Luke calculating appropriate medication doses and equipment sizes for this infant resuscitation*

# QUESTIONS? CONCERNS? TOPICS YOU WOULD LIKE TO SEE ADDRESSED USING SIMULATION?

Please reach out to us and let us know!

[Lcooke@northwell.edu](mailto:Lcooke@northwell.edu)

Thanks!

-Lauren, Will, and Debby



@DRLOCOSPODO

Check out some media from our  
recent simulation activities on  
instagram!