DRIVING CHANGE 2023
THE URGENT CARE CONVENTION

RESCUE Me!: A Novel Pediatric Resuscitation Course for the Urgent Care Setting

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Financial Disclosures

- I have no financial disclosures

Pediatric office emergencies are not uncommon

Potentially life-threatening illnesses do occur

- **Respiratory and infectious emergencies, seizures, & dehydration are most common**

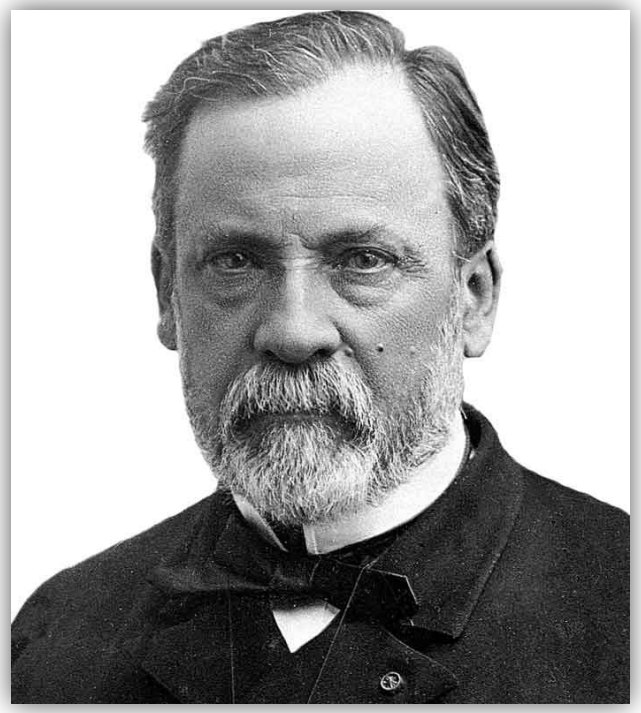
Providing urgent/emergent care until EMS arrives will be necessary at times

Implementing an Emergency Preparedness Plan (EPP) is therefore critical, but many offices do not have one – Why???

Wellness bias ➡ **underpreparation** ➡ **poor outcomes**

Stabilization of pediatric emergencies and early transfer for definitive care are critical

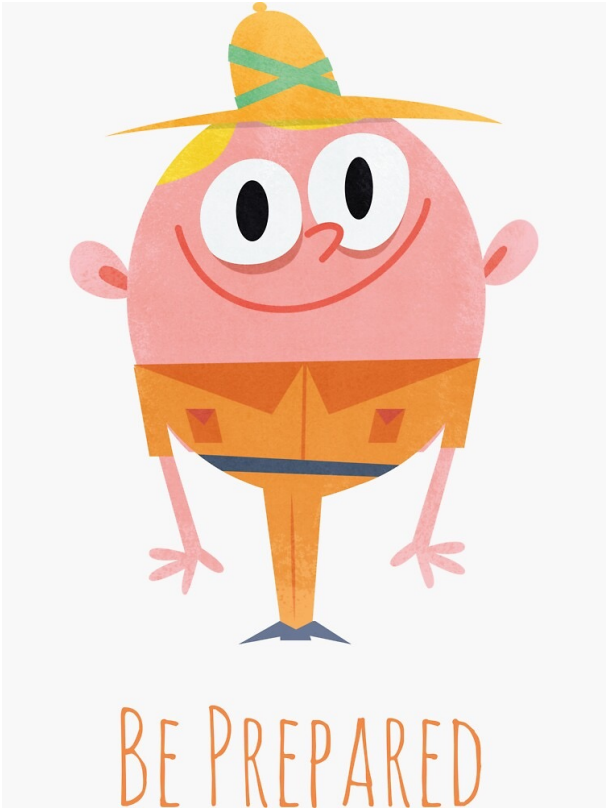
“Chance favors the prepared mind”



EPP Options

Courses
PALS, APLS, BLS, PEARS

Simulation
"mock" codes



Limitations:

PALS/APLS – primarily focused on in-hospital care

BLS – important basics covered, but not enough

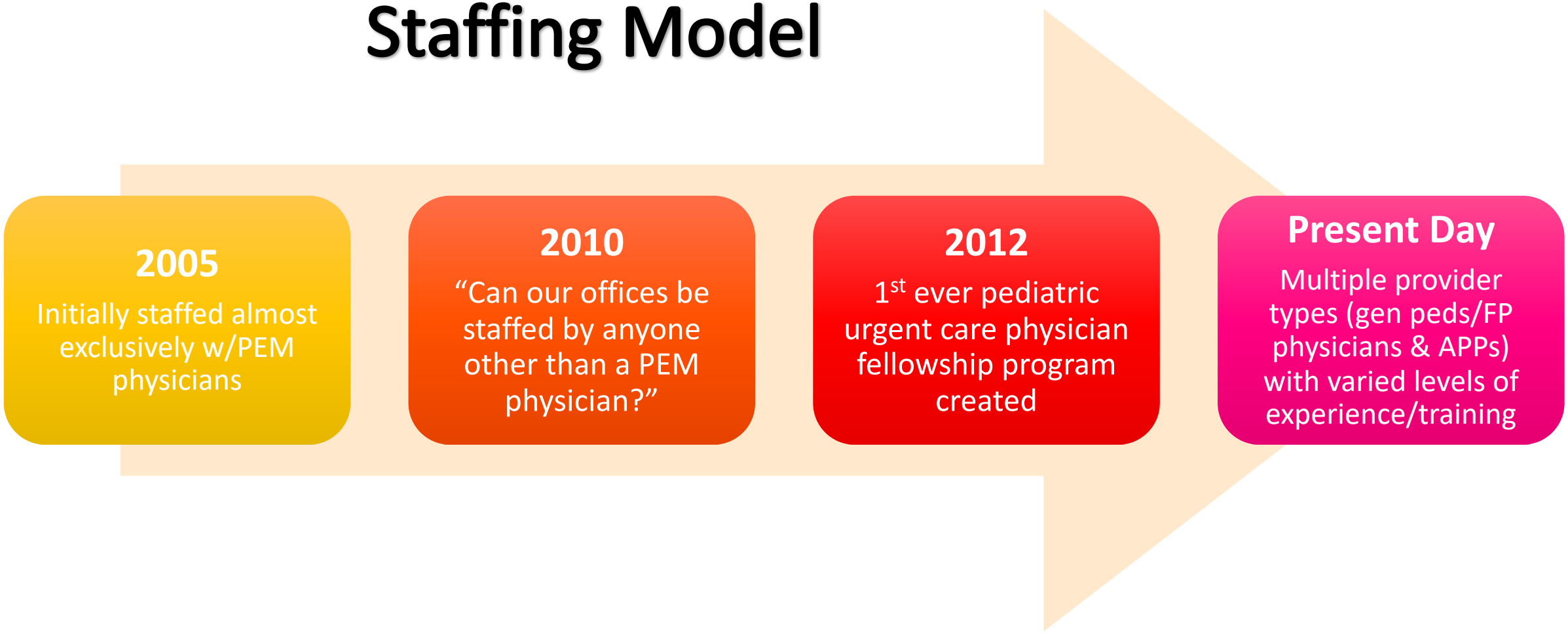
PEARS – more info, but not as relevant to pediatric-trained clinicians

Simulation – a valuable tool, but needs something more

Searching for “Just Right”

There is *currently* no ideal option to help us successfully manage the critically ill child in the outpatient setting

The Evolution of Our Staffing Model



How do we impart non-acute care-trained providers with the skills & knowledge to manage an office emergency?

Simulation program

- Low-medium fidelity manikin
- Management of common office emergencies
- Knowing our medication & equipment
- Team dynamics, full- vs minimal-staffing

Where do PALS & BLS fit into this?

- BLS certification required of ALL staff- UCA requirement
- Providers and nurses were previously required to maintain PALS certification

- When we attempted to use knowledge/skills acquired from PALS to manage patients in our simulation scenarios, there was a disconnect
- Scope of practice was often not relevant
- PALS was not reflective of equipment, medications, personnel in our office

We propose a novel course that is *relevant to our setting, higher yield, and shorter/less time-intensive*

Novel Course

Simulation

"mock" codes

RESCUE

Emergency Preparedness Course

What is RESCUE?

Course Description

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Target audience:

- Pediatric & non-pediatric physicians, APPs & nurses, EMT/Urgent Care Techs

Course content:

- Blended-learning approach

Course duration: 1 day

- Online modules (independent pre-coursework) – 3 hours
- Instructor-led classroom training – 4 hours

Assessment:

- Skills stations
- Simulation-based mega-codes
- Written post-test with minimum passing score of 80%

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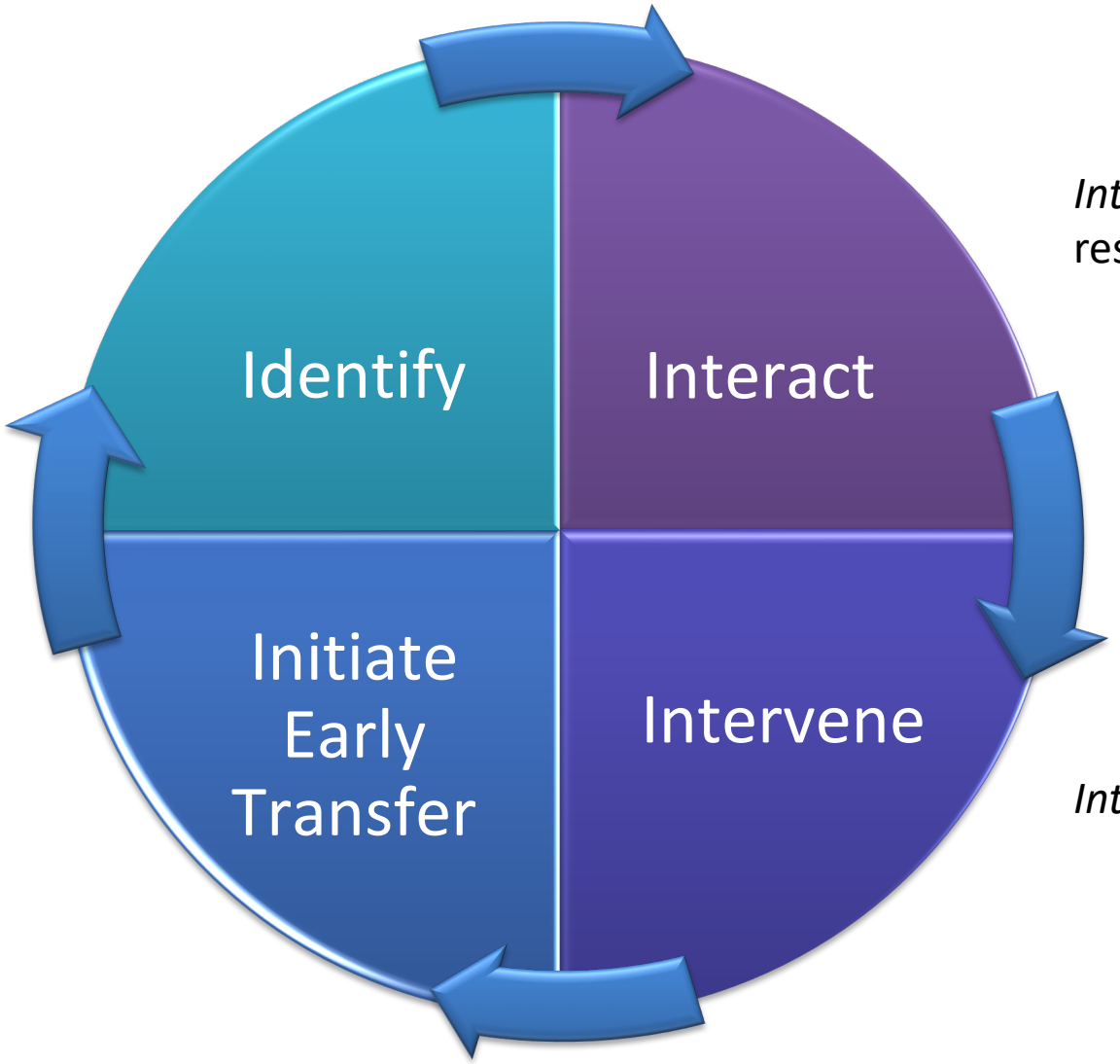
I^4 RESCUE Cycle: Overview

Identify a critically ill child



Interact with staff to mobilize resources

Initiate early transfer

Interventions in the UC setting

The Specifics: RESCUE Protocol

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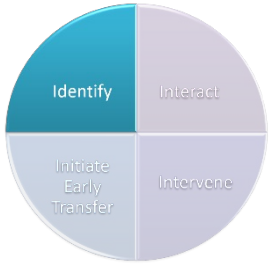
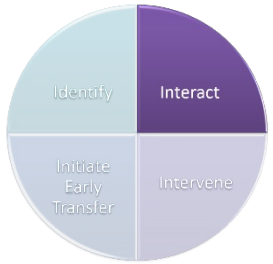


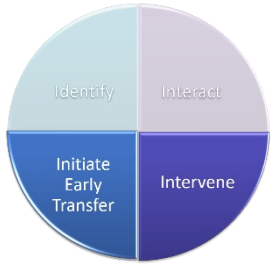
Initial Impression

PAT



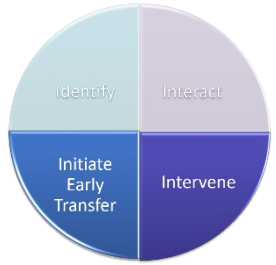
Mobilize Resources

- Alert provider and team
- Obtain necessary equipment



Critical Interventions

- Primary Assessment (Survey) & Vitals:
  - Airway
  - Breathing
  - Circulation
- Secondary Assessment (Survey)



Directed Interventions

For Example:

- Resp
  - Albuterol/Ipratropium
  - Racemic Epinephrine
  - Dexamethasone
- Shock
  - Normal Saline
- Cardiac
  - Adenosine
  - Epinephrine

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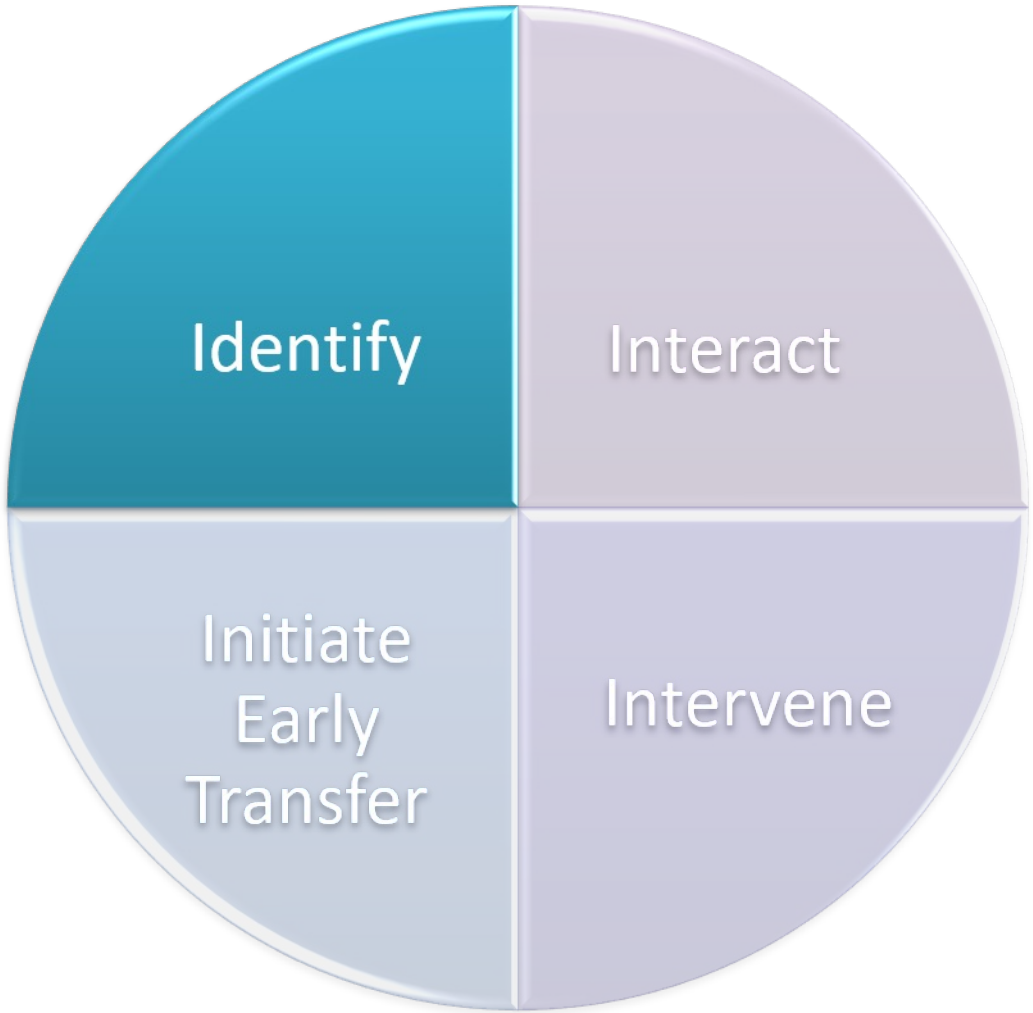
Identify
Interact
Initiate Early Transfer
Intervene

Identify

Front Desk is the Front Line

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Parental/ Patient concern

Front desk screens patient

Click Me

If positive screen, alert clinical staff

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RESCUE Protocol

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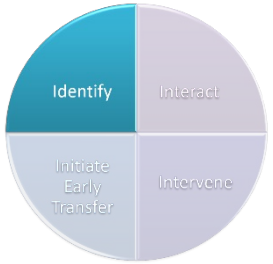

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Identify

Pediatric Assessment Triangle

Identify PAT Cues

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STABLE

Click Me

RESPIRATORY DISTRESS

Click Me

RESPIRATORY FAILURE

Click Me

CNS/METABOLIC

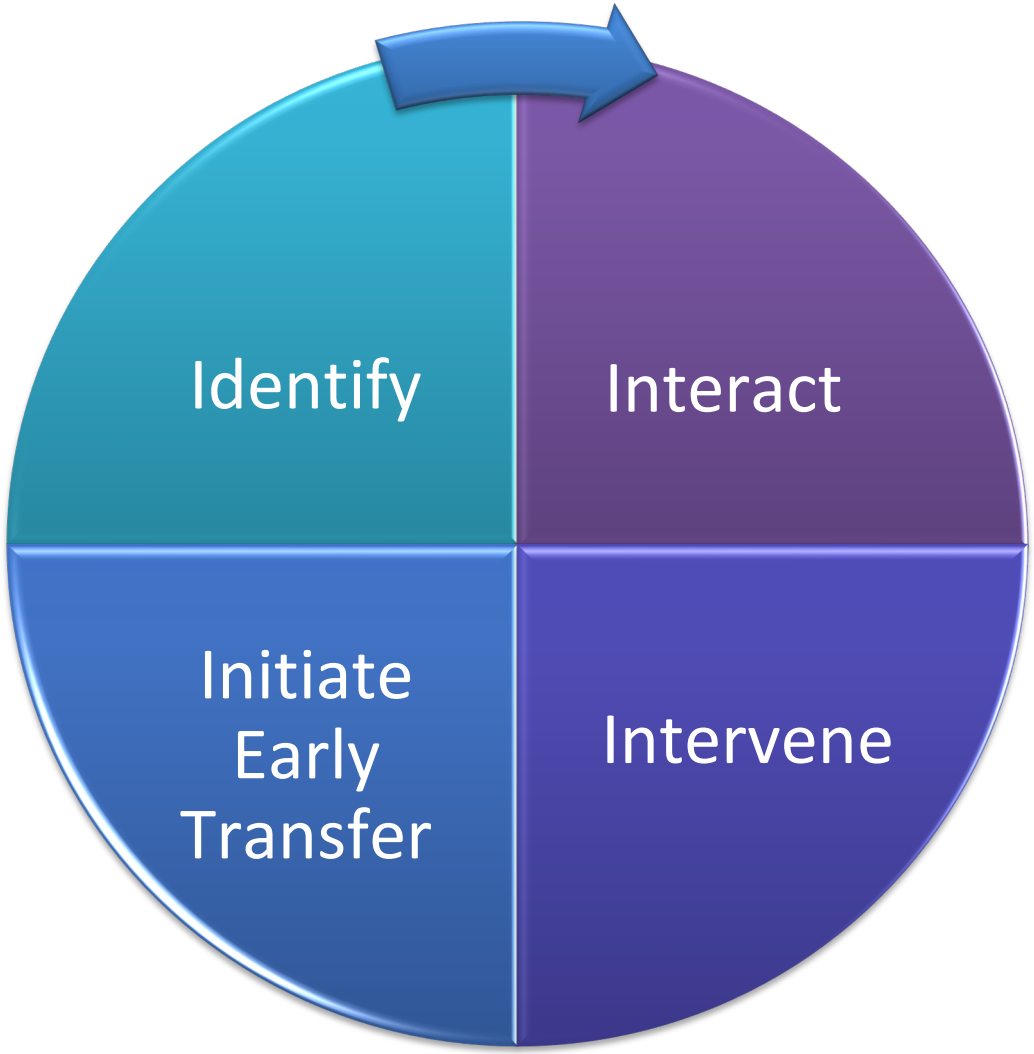
Click Me

Click Me

SHOCK

CARDIOPULMONARY FAILURE

I^4 RESCUE Cycle



Interact

eam Roles in the Urgent Care Setting

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Click Roles

Full Team Roles

Small Team Roles

Knowing roles is crucial to minimizing errors and anxiety

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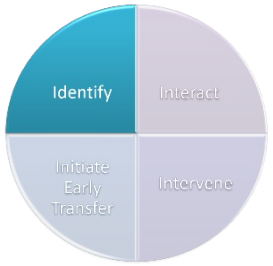
RESCUE Protocol



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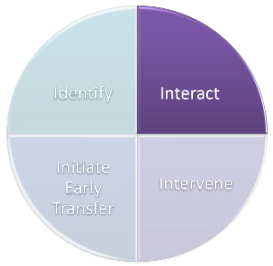
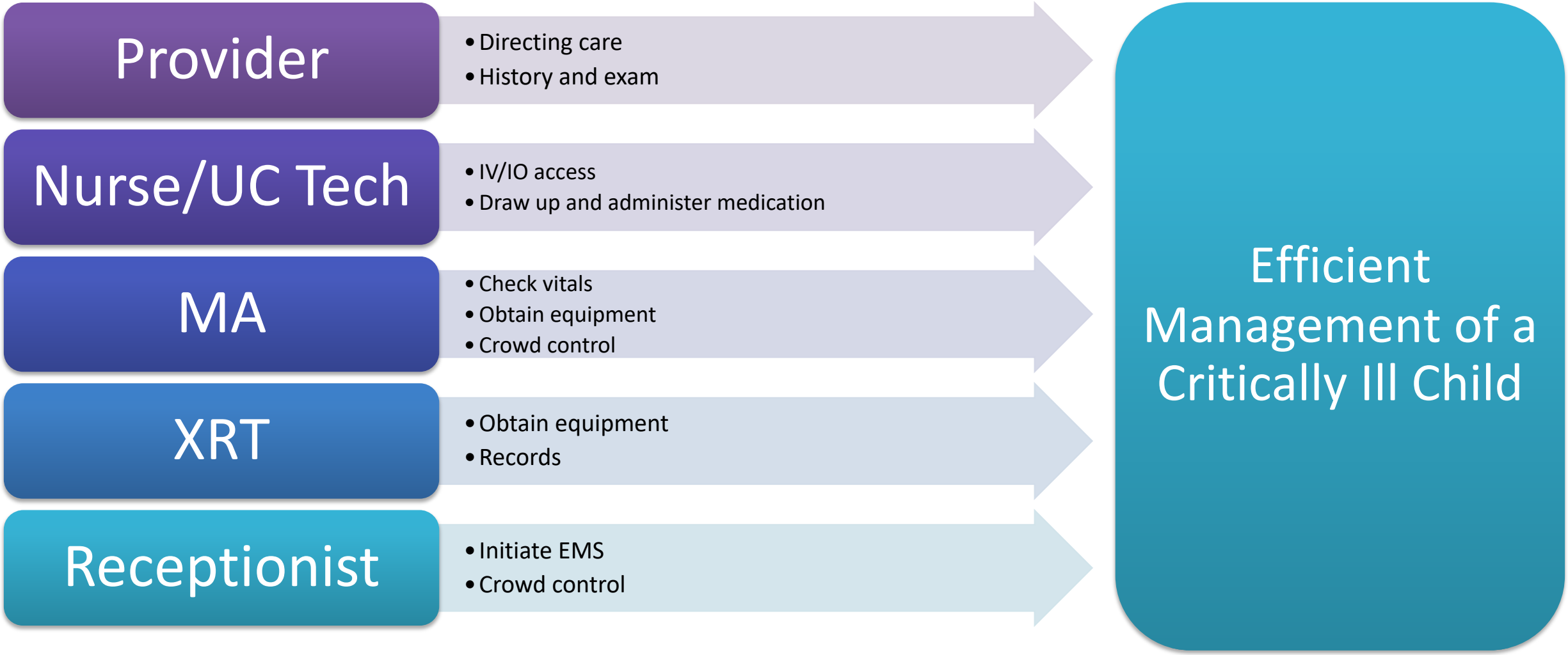


Mobilize Resources

- Alert provider and team
- Obtain necessary equipment

Interact

Mobilize Personnel



Interact

Mobilize Personnel

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Provider
- Directing care
- History and exam
- *Nurse/UCT tasks assumed by provider if not present*

Nurse/UC Tech
- IV/IO access
- Draw up and administer medication

MA

XRT
- Check vitals
- Obtain equipment
- Records
- Initiate EMS
- Crowd control

Receptionist
- Crowd Control
- Initiate EMS

Efficient Management of a Critically Ill Child

Interact

Mobilize Equipment

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Vitals Cart

Glucometer

Consider IV pole, manual BP cuff, portable pulse oximeter, rectal thermometer, as needed

Code Cart

AED

Suction

Critical Care Guide

Consider Anaphylaxis Kit, EKG, if appropriate

Oxygen Supplies

Oxygen tank

BVM

Oxygen masks, nasal cannula

Consider nebulizer, if needed

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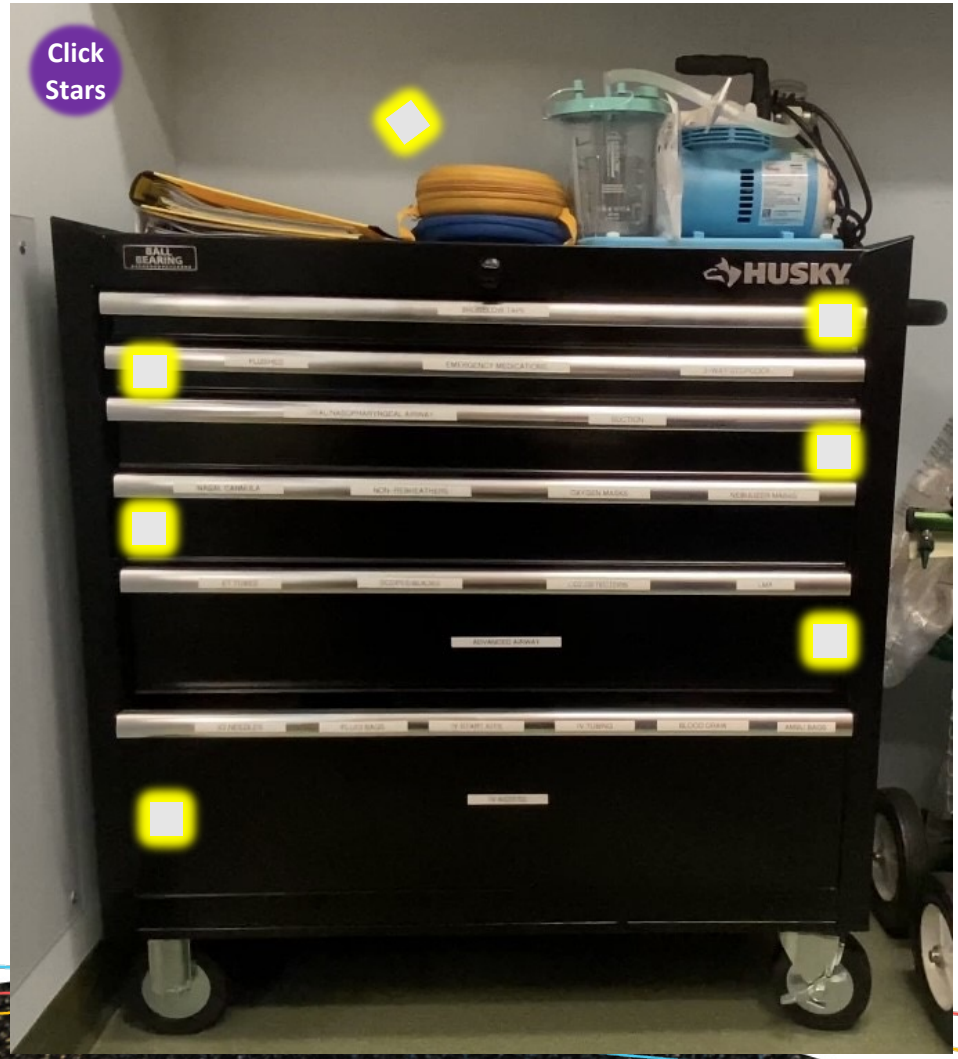
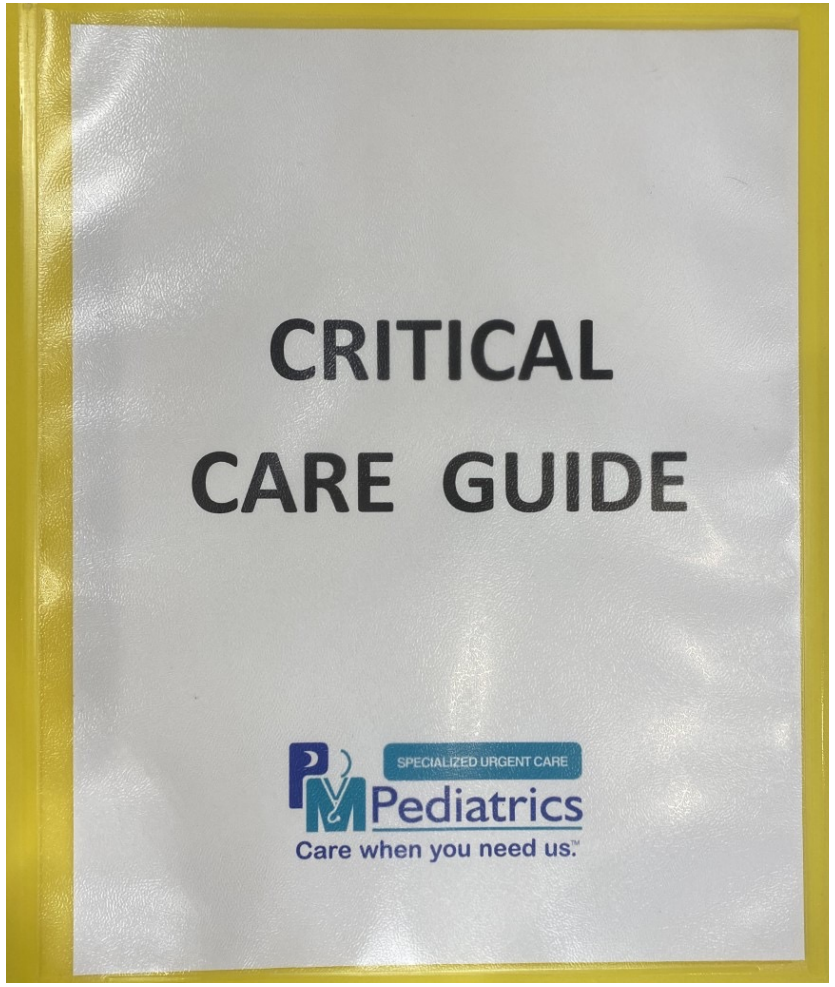
Interact

Examples of Crash Cart Contents



Interact

Intro to the Critical Care Guide



Click on each ★ for a glimpse into each section

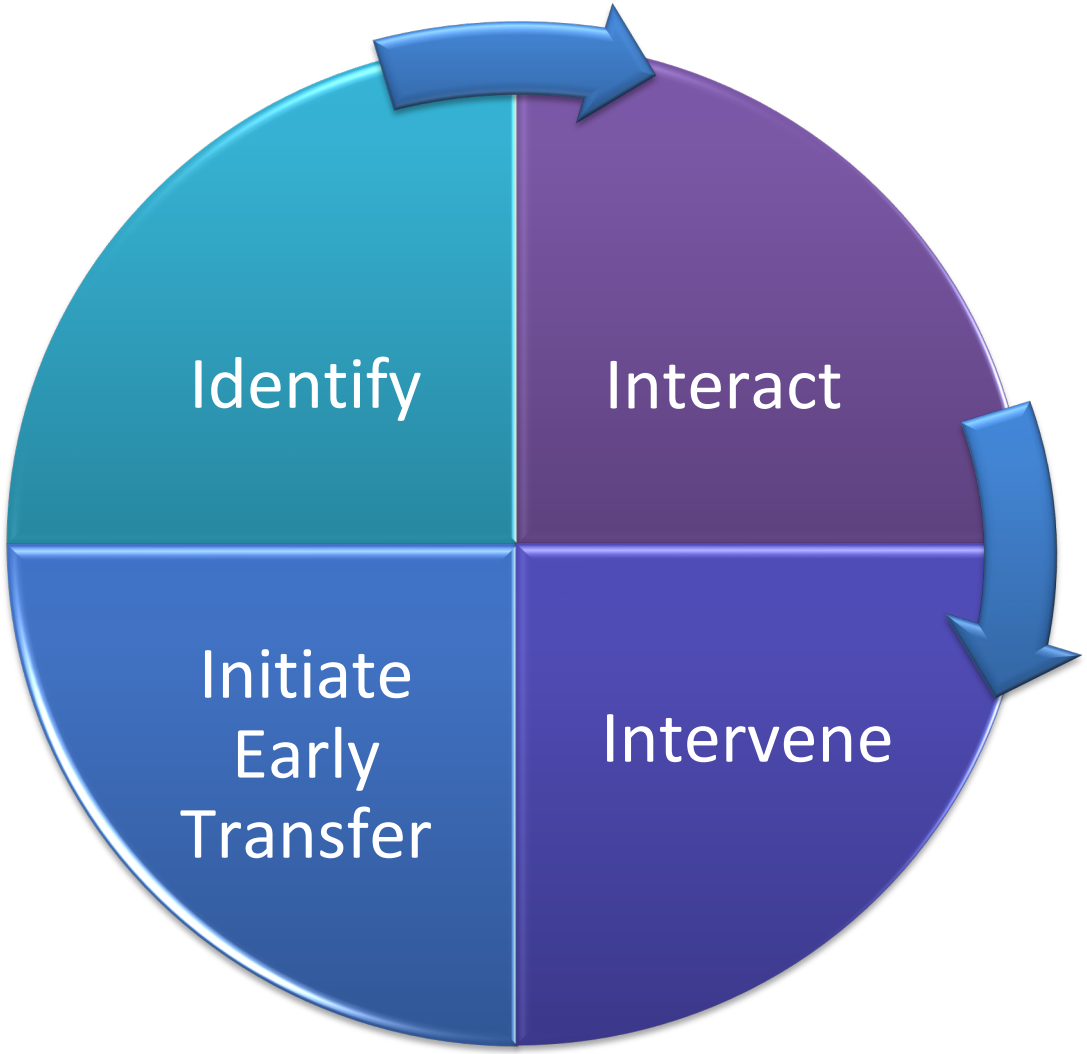
1. EMS Call Form
2. Staff Roles for the Critically Ill Patient
3. Clinical Guidelines
4. Weight-Based Medication Guide
5. Critical Care Flow Sheet
6. Simulation Program Documents

Interact

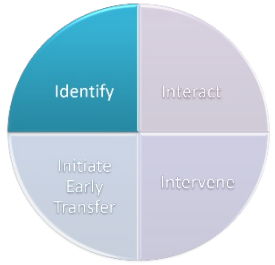
Mobilize Patients

The Patient	Transfer to procedure room
Other Patients	Remove from procedure room, if occupied
Front Desk	Inform other patients of office emergency & possible care delay, “crowd control” Ready to activate EMS

I^4 RESCUE Cycle



Intervene



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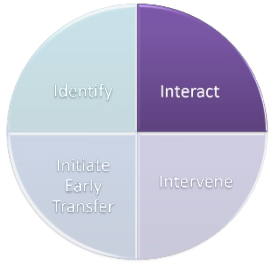

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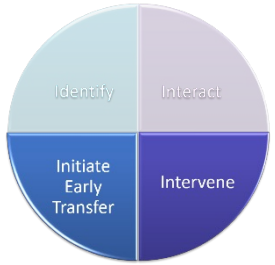


Critical Interventions

- Primary Assessment (Survey) & Vitals:
  - Airway
  - Breathing
  - Circulation
- Secondary Assessment (Survey)

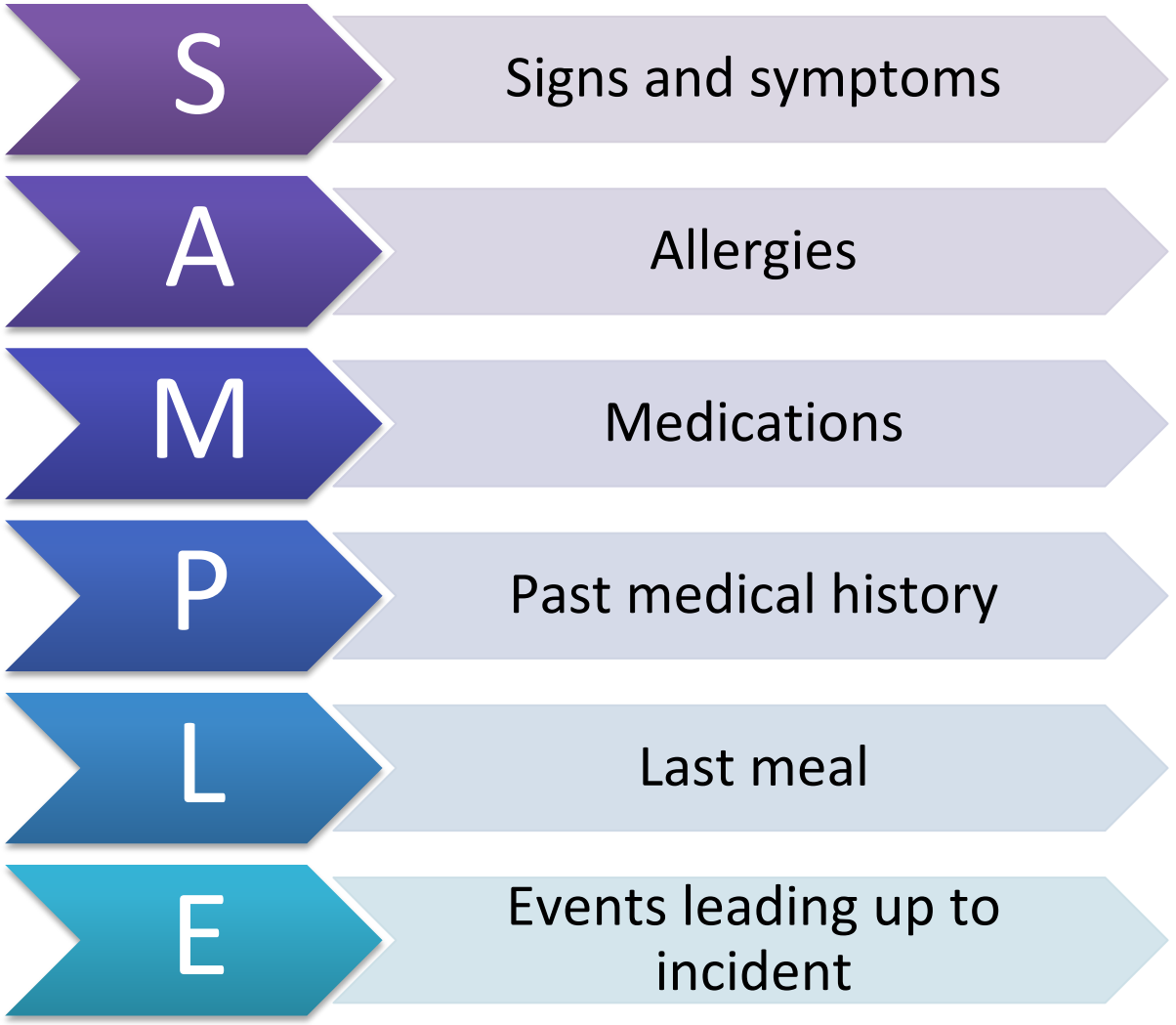
Intervene

Critical Interventions: ABCs

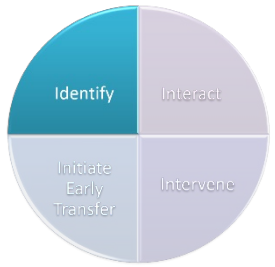
Critical priorities that MUST happen first:

Airway	Position, suction, OPA/NPA/LMA
Breathing	O_2 via NC, simple FM, NRB, BVM
Circulation	IV/IO access, fluid resuscitation

Secondary Assessment: Obtain Focused History



RESCUE Protocol



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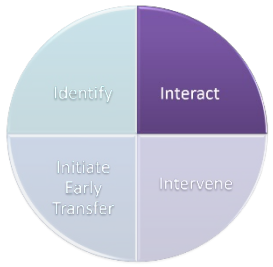

Mobilize Resources

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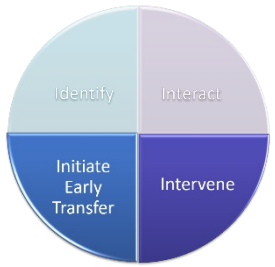

Critical Interventions

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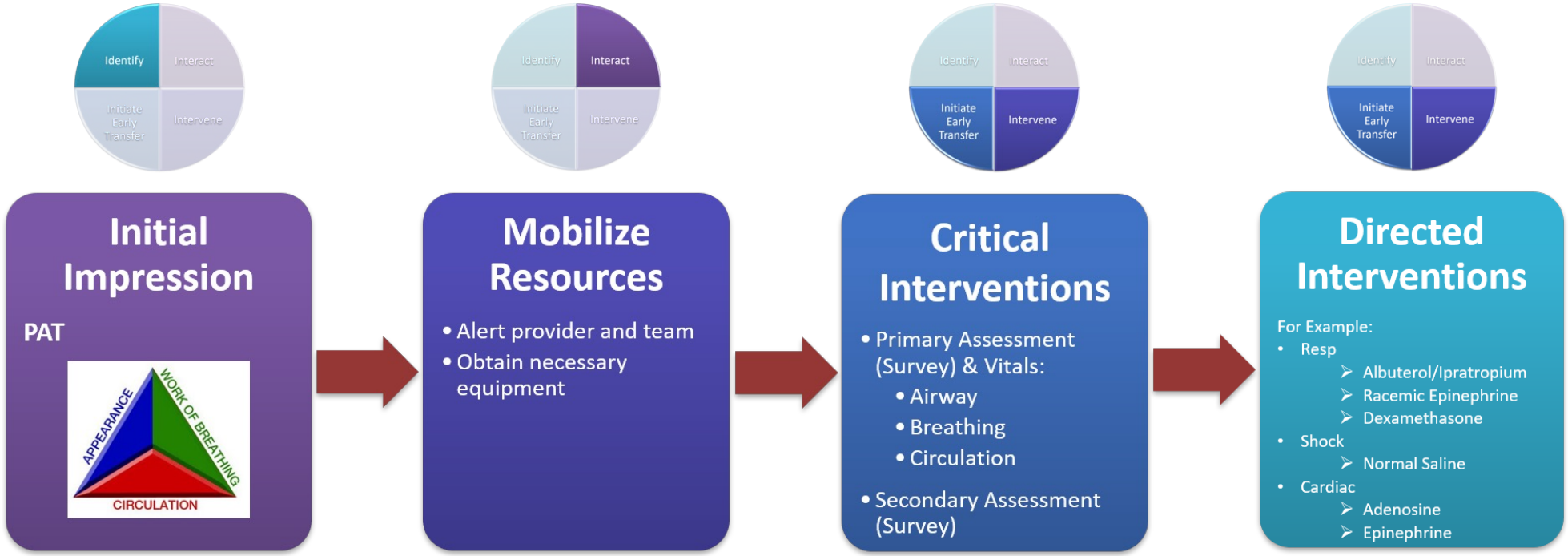
RESCUE Protocol



These first 3 steps will be the same for all critically ill children, regardless of etiology

At this stage, the underlying cause may become apparent & directed interventions should be initiated

Intervene

Directed Interventions

Directed interventions for specific etiologies are discussed in detail in their corresponding modules

- Respiratory
- Shock
- Cardiac
- Unresponsive/Seizure Patient

Shock

↑HR
+/- ↓BP
+/- ↑ cap refill
+/- AMS, pallor

Initial Impression

PAT

Mobilize Resources

- Alert provider and team
- Obtain necessary equipment

Critical Interventions

- Primary Assessment (Survey) & Vitals:
  - Airway
  - Breathing
  - Circulation
- Secondary Assessment (Survey)

Click each ↷ to view more details

hx of v/d, poor po, trauma

Hypovolemic Shock

Consider CMP, CBC, D-stick

NS bolus (20cc/kg, max 1L) wide open, consider Zofran, dextrose bolus PRN

Repeat vitals and reassess frequently (q5-15 min); repeat NS bolus (up to 3x) until improved vitals/exam

INITIATE EARLY TRANSFER
if hypotensive shock or poor response to above

allergic rxn, bounding pulses, fever, warm

Distributive Shock

Consider CMP, CBC, D-stick, cultures if sepsis suspected

NS bolus (20mL/kg) wide open max of 80mL/kg
If sepsis, IV/IM **ceftriaxone** (50mg/kg, max, give EARLY)
If anaphylaxis, **Epi IM** (0.15mg<30kg, 0.3mg if >30kg)

Repeat vitals and reassess frequently (q5-15 min); repeat bolus (up to 3X) until improved, antipyretics PRN

TRANSFER
if no improvement or if anaphylaxis requiring repeat Epi

possible ↑ respiratory effort, ↑↑ HR, cold, mottled, palpable liver edge, JVD, crackles, murmur

Cardiogenic Shock

If SVT suspected, vagal maneuvers (ice, bearing down, etc.)
Adenosine (0.1mg/kg, max 6mg, 2nd /3rd dose PRN 0.2mg/kg, max 12mg)

NS bolus (**10mL**/kg) over 30 min – LOW AND SLOW

Repeat vitals and reassess frequently (q5-15 min); repeat bolus (up to 3X) until improved vitals/exam

INITIATE EARLY TRANSFER

Absent BS, muffled heart sounds, ↑ respiratory effort, chest pain, +/- tracheal deviation, h/o trauma

Obstructive Shock

If tracheal deviation, needle decompression, O_2 & IV/IO access
Unless stable, do not attempt CXR

NS bolus 20mL/kg

IMMEDIATE TRANSFER

Cardiac Arrhythmia

If unresponsive, check pulse, **initiate CPR** if pulseless, **attach AED** and follow

Unresponsive Patient Pathway

Initial Impression

PAT

Mobilize Resources

- Alert provider and team
- Obtain necessary equipment

Critical Interventions

- Primary Assessment (Survey) & Vitals:
  - Airway
  - Breathing
  - Circulation
- Secondary Assessment (Survey)

↓ HR

Stable Bradycardia

no sx

EKG

Nl EKG= No intervention

Mobitz II or 3rd degree heart-block = **TRANSFER**

Any other EKG = **Cardiology f/u**

Unstable Bradycardia

+ sx +/-AMS/ syncope, ↑ CR

HR <60, ↓BP, ↓ SpO_2 with AMS = **Initiate CPR and attach AED**

Epinephrine 0.01 mg/kg (0.1 mg/mL) q3-5min

H's and T's

TRANSFER

↑ HR

Likely Sinus Tachycardia (non-cardiac etiology)

<180 (<220 infant) c/w hx

Intervene accordingly & reassess

Possible Stable SVT (vs Stable Ventricular Tachycardia)

>180 (>220 infant) no distress, nl perfusion

Obtain EKG

See **SVT management**

INITIATE TRANSFER

Unstable Tachycardia

+/- distress
+/- AMS/syncope

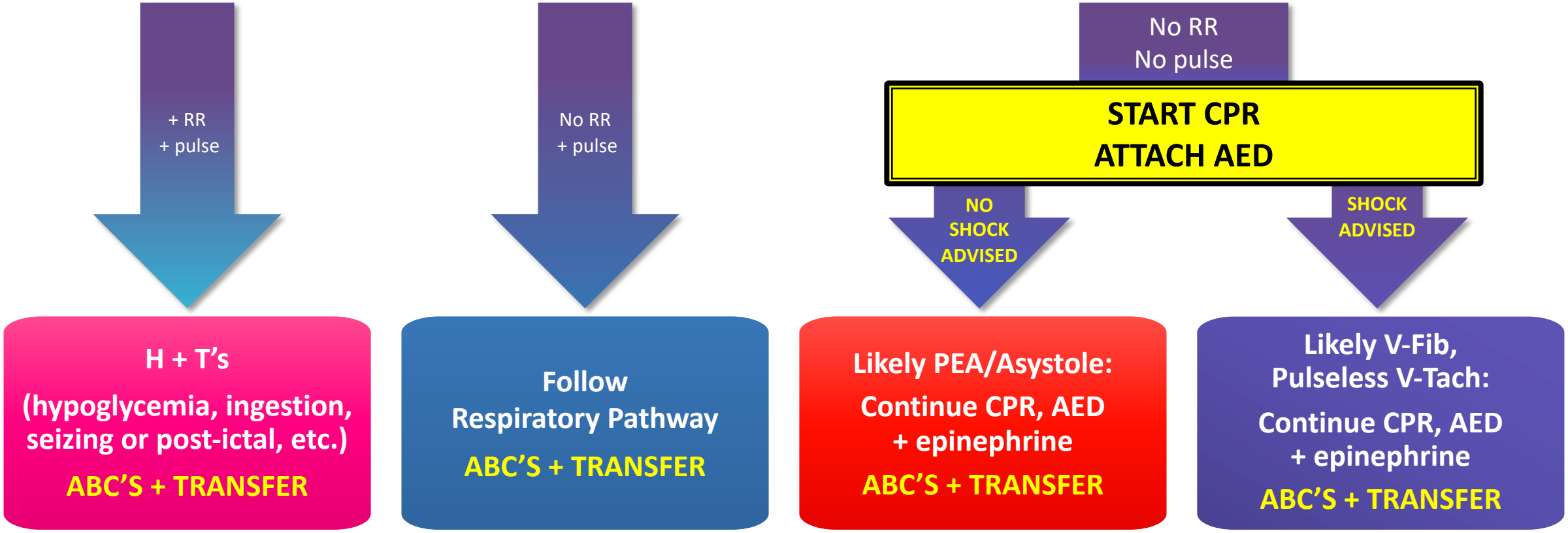
Consider EKG

If SVT, vagal maneuvers/adenosine

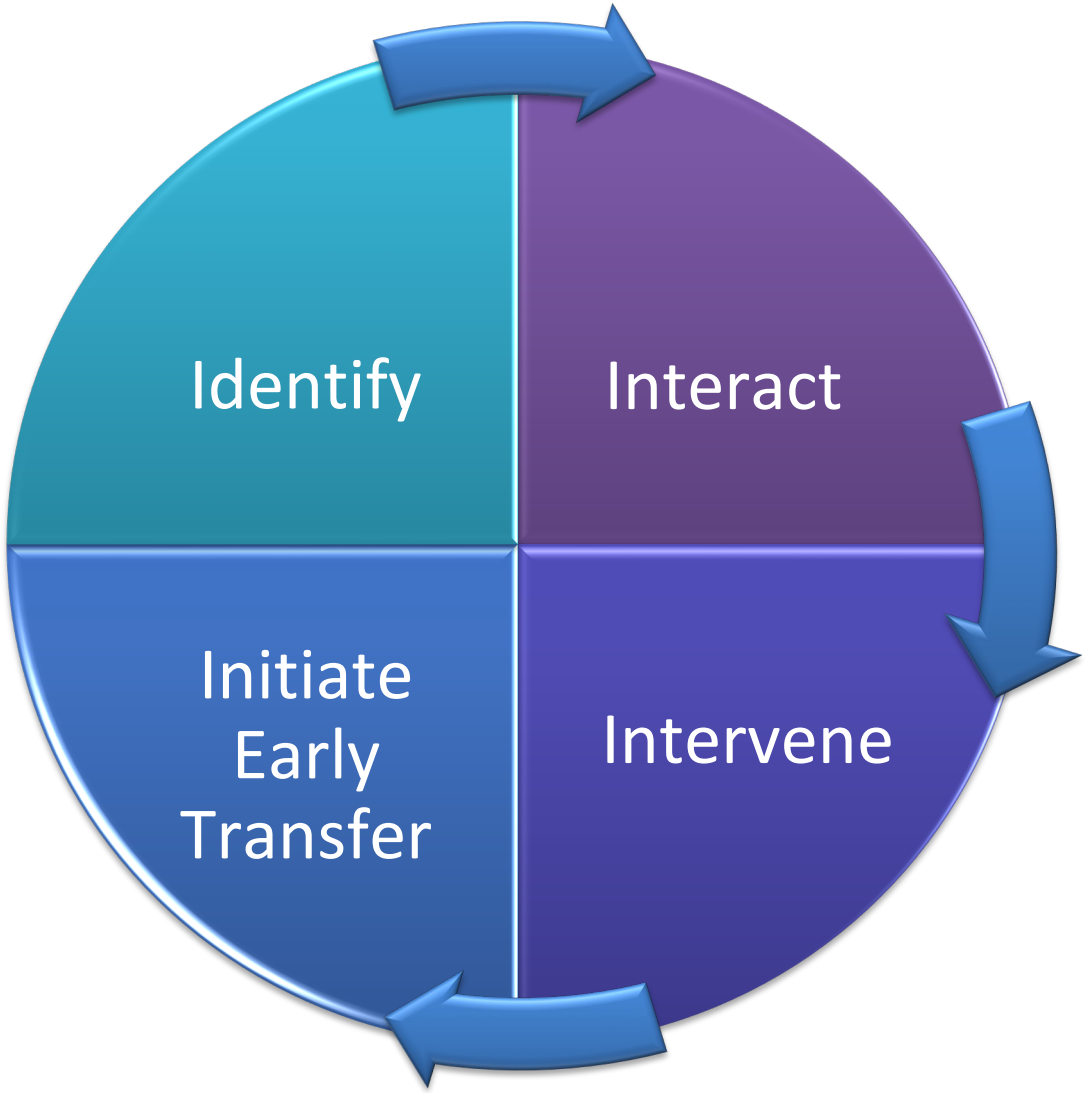
IMMEDIATE TRANSFER

Click each ↗ to view more details

Unresponsive Patient



I^4 RESCUE Cycle



Initiate Early Transfer

Determine disposition in a timely manner

Better outcomes with early transfer

Activate early, especially for signs of impending cardiorespiratory failure

Reassessment

Improved appearance? Improved effort? Improved vitals?

Key questions to ask yourself

What is the likelihood that I will be able to fix this patient & send them home?

Just because I can manage this patient, does it mean I should?

When in doubt, send them out!

Initiate Early Transfer

Determine disposition in a timely manner

Immediate transfer if:

Any red flags are present

or

Any key interventions for specific conditions are repeated

Examples:

- >1 racemic epi for croup
- >1 epi for anaphylaxis
- Asthma/croup presenting with significant hypoxia
- Altered mental status
- Neurovascular compromise
- Seizures (unless simple febrile)

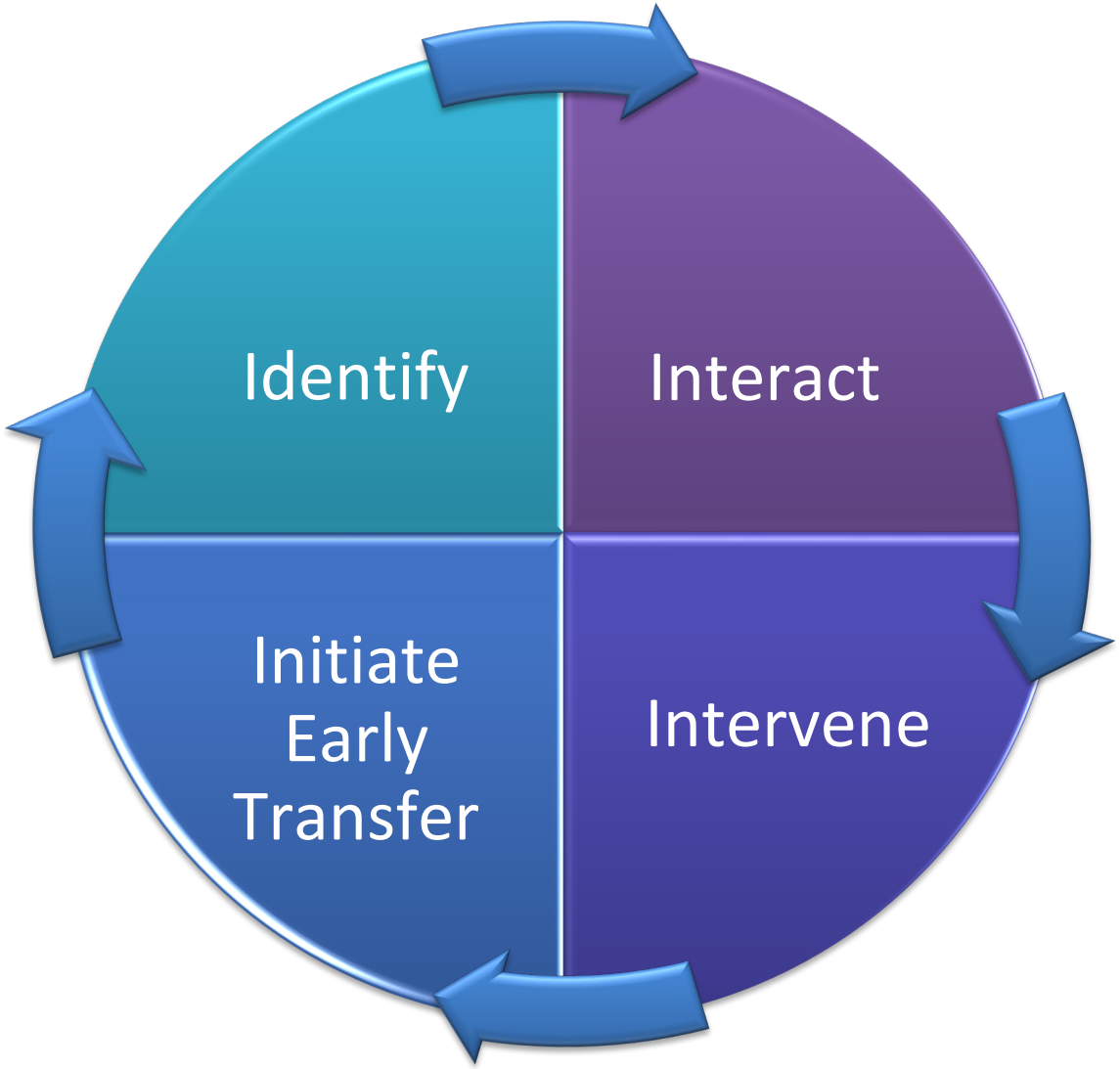
Early transfer to advanced care can be crucial to successful management of the critically ill child

Initiate Early Transfer

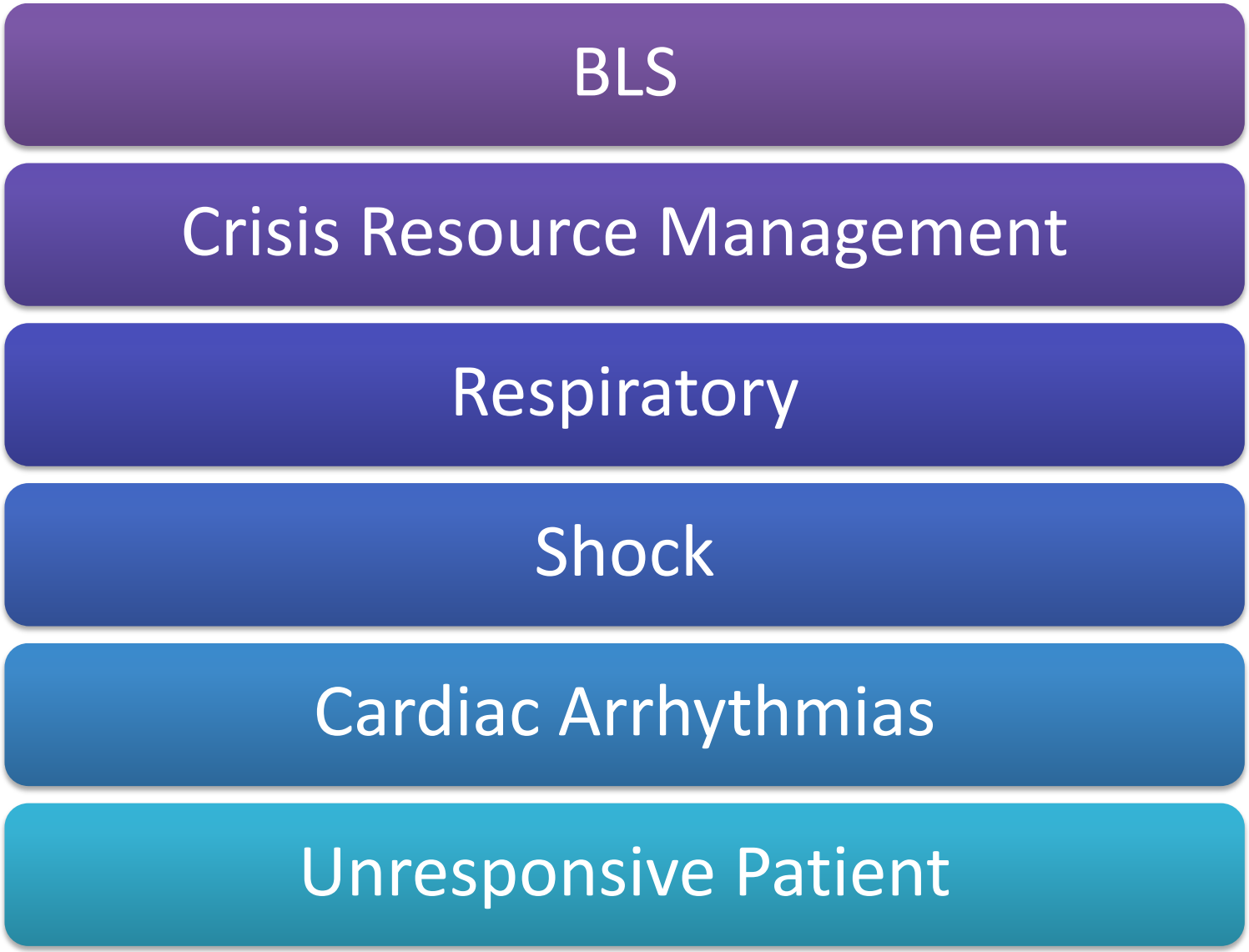
Choose Appropriate Transport Modality

- EMS: ALS vs BLS
- Hospital transport team
- Private transport companies
- Personal vehicle

I^4 RESCUE Cycle



Course Site Map



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-
-
- ONE
  -
  -

What’s next for RESCUE…

- Course buildout on LMS platform
- Company-wide rollout
- “Working out the kinks” phase
- Obtain eventual certification thru accrediting body
- Offer Instructor and Provider courses externally

References

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EMS Call Sheet

Notes:

- Should be stored on the code cart.
- Please use to guide receptionist when calling EMS/Transfer Team
- Directors – please complete question 1 (transfer options) and question 2 (address), and reprint for your locations

---

1. **Who should be called (circle one):** 911 EMS company Hospital Transfer Team
   Options include (name of EMS company / Transfer Team and contact):
   a. (Type ambulance company or transfer team numbers here)
   b. (Type ambulance company or transfer team numbers here)

2. **PM Pediatrics Office Address:**

   (type address here)

3. **Age** _____ If unknown, circle one: Infant Child Adolescent Adult

4. **Sex**_____

5. **Medical Problem**_____
(as specified by provider or RN)

6. **Need for ALS vs BLS** ambulance (as requested by provider, **circle one**): ALS BLS

7. **Ask EMS for their ETA** (estimated time arrival) as specified by 911 dispatch or EMS) _____

Full Team Roles

Reception

- Identify critically ill patient on arrival
- Alert team using "code blue" announcement and location
- Can help transfer patient to treatment room
- Use EMS call sheet to activate EMS or 911 once prompted by provider
- Alert other patients that there may be a delay in care

XR Tech

- Clear treatment room (if both occupied)
- Record all pertinent data and medications given
- VITALS – pulse ox, respiratory rate, heart rate, +/- temp (or MA)

MA

- VITALS – pulse ox, respiratory rate, heart rate, +/- temp (or XRT)
- Assist in procedures when needed
- Locate/bring code cart into the resuscitation
- Can locate and obtain equipment if needed
- Alert other patients in office than there may be a delay in care during emergency

Nurse

- Assist in transfer of patient to treatment room if needed
- Establish IV access (if needed)
- Draw and deliver medications / IVF

Provider

- **Team leader** – all communication routes through the team leader
- Initial assessment
- Alert XRT/Receptionist to notify if EMS is needed
- Direct and administer care
- May have to do nursing roles if nurse not present
- Secondary provider (if available):
  a. Assist primary provider in care
  b. Continue to provide care to remaining patients in office

Small Team Roles

Receptionist/MA

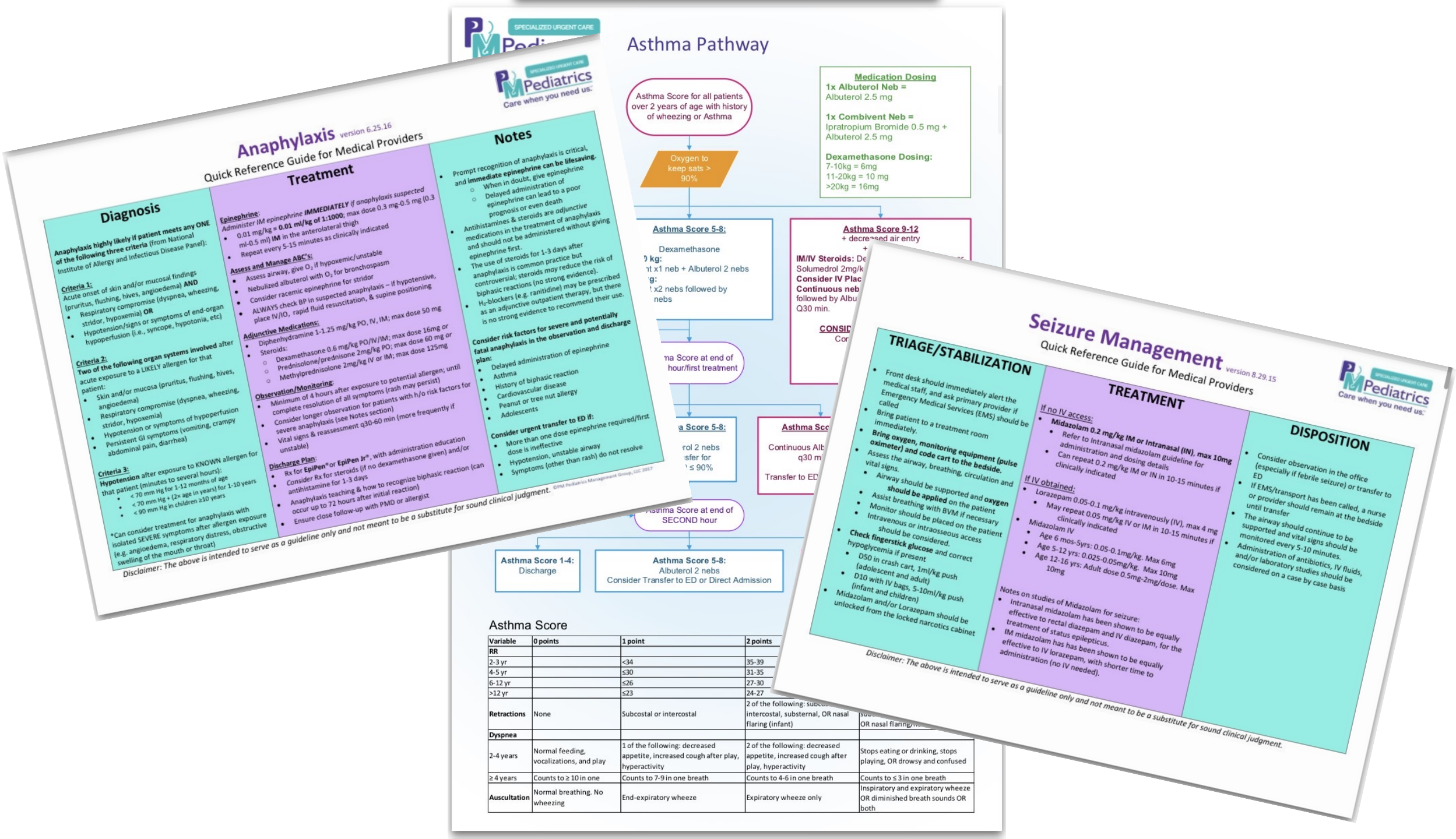
- Identify critically ill patient on arrival
- Alert team using "code blue" announcement and location
- Can help transfer patient to treatment room
- Locate and bring code cart to resuscitation (should be in resusc room)
- Use EMS call sheet and call EMS/911 once prompted by provider (or XRT)
- Assist in procedures when needed
- Can locate and obtain equipment if needed

XR Tech

- Help transfer patient if needed
- VITALS – pulse ox, respiratory rate, heart rate, +/- temp (or MA)
- Record using Critical Care Flow Sheet (if needed)
- Alert other patients that there may be a delay in care
- Backup for calling EMS/911 once prompted by provider((Or Receptionist/MA)

Provider

- **Team leader** – all communication routes through the team leader
- Initial assessment
- Alert XRT/Receptionist to notify if EMS is needed
- Direct and administer care
- May have to do nursing roles if nurse not present
  - Assist in transfer of patient to treatment room if needed
  - Establish IV access (if needed)
  - Draw and deliver medications / IVF



Anaphylaxis version 6.25.16

Quick Reference Guide for Medical Providers

Diagnosis

Anaphylaxis highly likely if patient meets any ONE of the following three criteria (from National Institute of Allergy and Infectious Disease Panel):

Criteria 1:
Acute onset of skin and/or mucosal findings (pruritus, flushing, hives, angioedema) **AND**
- Respiratory compromise (dyspnea, wheezing, stridor, hypoxemia) **OR**
- Hypotension/signs or symptoms of end-organ hypoperfusion (i.e., syncope, hypotonia, etc)

Criteria 2:
Two of the following organ systems involved after acute exposure to a LIKELY allergen for that patient:
- Skin and/or mucosa (pruritus, flushing, hives, angioedema)
- Respiratory compromise (dyspnea, wheezing, stridor, hypoxemia)
- Hypotension or symptoms of hypoperfusion
- Persistent GI symptoms (vomiting, crampy abdominal pain, diarrhea)

Criteria 3:
Hypotension after exposure to KNOWN allergen for that patient (minutes to several hours):
- < 70 mm Hg for 1-12 months of age
- < 70 mm Hg + (2x age in years) for 1-10 years
- < 90 mm Hg in children ≥10 years

*Can consider treatment for anaphylaxis with isolated SEVERE symptoms after allergen exposure (e.g. angioedema, respiratory distress, obstructive swelling of the mouth or throat)

Treatment

Epinephrine:
*Administer IM epinephrine **IMMEDIATELY** if anaphylaxis suspected*
- 0.01 mg/kg = **0.01 ml/kg of 1:1000**; max dose 0.3 mg-0.5 mg (0.3 ml-0.5 ml) **IM** in the anterolateral thigh
- Repeat every 5-15 minutes as clinically indicated

Assess and Manage ABC's:
- Assess airway, give O_2 if hypoxemic/unstable
- Nebulized albuterol with O_2 for bronchospasm
- Consider racemic epinephrine for stridor
- ALWAYS check BP in suspected anaphylaxis – if hypotensive, place IV/IO, rapid fluid resuscitation, & supine positioning

Adjunctive Medications:
- Diphenhydramine 1-1.25 mg/kg PO, IV, IM; max dose 50 mg
- Steroids:
  - Dexamethasone 0.6 mg/kg PO/IV/IM; max dose 16mg or
  - Prednisolone/prednisone 2mg/kg PO; max dose 60 mg or
  - Methylprednisolone 2mg/kg IV or IM; max dose 125mg

Observation/Monitoring:
- Minimum of 4 hours after exposure to potential allergen; until complete resolution of all symptoms (rash may persist)
- Consider longer observation for patients with h/o risk factors for severe anaphylaxis (see Notes section)
- Vital signs & reassessment q30-60 min (more frequently if unstable)

Discharge Plan:
- Rx for **EpiPen®** or **EpiPen Jr®**, with administration education
- Consider Rx for steroids (if no dexamethasone given) and/or antihistamine for 1-3 days
- Anaphylaxis teaching & how to recognize biphasic reaction (can occur up to 72 hours after initial reaction)
- Ensure close follow-up with PMD or allergist

Notes

- Prompt recognition of anaphylaxis is critical, and **immediate epinephrine can be lifesaving.**
  - When in doubt, give epinephrine
  - Delayed administration of epinephrine can lead to a poor prognosis or even death
- Antihistamines & steroids are adjunctive medications in the treatment of anaphylaxis and should not be administered without giving epinephrine first.
- The use of steroids for 1-3 days after anaphylaxis is common practice but controversial; steroids may reduce the risk of biphasic reactions (no strong evidence).
- H_2-blockers (e.g. ranitidine) may be prescribed as an adjunctive outpatient therapy, but there is no strong evidence to recommend their use.

Consider risk factors for severe and potentially fatal anaphylaxis in the observation and discharge plan:
- Delayed administration of epinephrine
- Asthma
- History of biphasic reaction
- Cardiovascular disease
- Peanut or tree nut allergy
- Adolescents

Consider urgent transfer to ED if:
- More than one dose epinephrine required/first dose is ineffective
- Hypotension, unstable airway
- Symptoms (other than rash) do not resolve

Disclaimer: The above is intended to serve as a guideline only and not meant to be a substitute for sound clinical judgment. ©PM Pediatrics Management Group, LLC 2017

Asthma Pathway

Asthma Score for all patients over 2 years of age with history of wheezing or Asthma

Oxygen to keep sats > 90%

Medication Dosing
1x Albuterol Neb =
Albuterol 2.5 mg

1x Combivent Neb =
Ipratropium Bromide 0.5 mg + Albuterol 2.5 mg

Dexamethasone Dosing:
7-10kg = 6mg
11-20kg = 10 mg
>20kg = 16mg

Asthma Score 5-8:
Dexamethasone
kg:
t x1 neb + Albuterol 2 nebs
g:
x2 nebs followed by
nebs

Asthma Score 9-12
+ decreased air entry
+
IM/IV Steroids: De
Solumedrol 2mg/k
Consider IV Plac
Continuous neb
followed by Albu
Q30 min.
CONSID
Cor

ma Score at end of hour/first treatment

a Score 5-8:
rol 2 nebs
sfer for
≤ 90%

Asthma Sc
Continuous Alb
q30 m
Transfer to ED

Asthma Score at end of SECOND hour

Asthma Score 1-4:
Discharge

Asthma Score 5-8:
Albuterol 2 nebs
Consider Transfer to ED or Direct Admission

Asthma Score

Variable	0 points	1 point	2 points	
RR				
2-3 yr		<34	35-39	
4-5 yr		≤30	31-35	
6-12 yr		≤26	27-30	
>12 yr		≤23	24-27	
Retractions	None	Subcostal or intercostal	2 of the following: subco intercostal, substernal, OR nasal flaring (infant)	sub OR nasal flaring
Dyspnea				
2-4 years	Normal feeding, vocalizations, and play	1 of the following: decreased appetite, increased cough after play, hyperactivity	2 of the following: decreased appetite, increased cough after play, hyperactivity	Stops eating or drinking, stops playing, OR drowsy and confused
≥ 4 years	Counts to ≥ 10 in one	Counts to 7-9 in one breath	Counts to 4-6 in one breath	Counts to ≤ 3 in one breath
Auscultation	Normal breathing. No wheezing	End-expiratory wheeze	Expiratory wheeze only	Inspiratory and expiratory wheeze OR diminished breath sounds OR both

Seizure Management version 8.29.15

Quick Reference Guide for Medical Providers

TRIAGE/STABILIZATION

- Front desk should immediately alert the medical staff, and ask primary provider if Emergency Medical Services (EMS) should be called
- Bring patient to a treatment room immediately.
- **Bring oxygen, monitoring equipment (pulse oximeter) and code cart to the bedside.**
- Assess the airway, breathing, circulation and vital signs.
  - Airway should be supported and **oxygen should be applied** on the patient
  - Assist breathing with BVM if necessary
  - Monitor should be placed on the patient
  - Intravenous or intraosseous access should be considered.
- **Check fingerstick glucose** and correct hypoglycemia if present
  - D50 in crash cart, 1ml/kg push (adolescent and adult)
  - D10 with IV bags, 5-10ml/kg push (infant and children)
- Midazolam and/or Lorazepam should be unlocked from the locked narcotics cabinet

TREATMENT

If no IV access:
- **Midazolam 0.2 mg/kg IM or Intranasal (IN), max 10mg**
  - Refer to Intranasal midazolam guideline for administration and dosing details
  - Can repeat 0.2 mg/kg IM or IN in 10-15 minutes if clinically indicated

If IV obtained:
- Lorazepam 0.05-0.1 mg/kg intravenously (IV), max 4 mg
  - May repeat 0.05 mg/kg IV or IM in 10-15 minutes if clinically indicated
- Midazolam IV
  - Age 6 mos-5yrs: 0.05-0.1mg/kg. Max 6mg
  - Age 5-12 yrs: 0.025-0.05mg/kg. Max 10mg
  - Age 12-16 yrs: Adult dose 0.5mg-2mg/dose. Max 10mg

Notes on studies of Midazolam for seizure:
- Intranasal midazolam has been shown to be equally effective to rectal diazepam and IV diazepam, for the treatment of status epilepticus.
- IM midazolam has has been shown to be equally effective to IV lorazepam, with shorter time to administration (no IV needed).

DISPOSITION

- Consider observation in the office (especially if febrile seizure) or transfer to ED
- If EMS/transport has been called, a nurse or provider should remain at the bedside until transfer
- The airway should continue to be supported and vital signs should be monitored every 5-10 minutes.
- Administration of antibiotics, IV fluids, and/or laboratory studies should be considered on a case by case basis

Disclaimer: The above is intended to serve as a guideline only and not meant to be a substitute for sound clinical judgment.

10 - 11 KG

Medication	Route	Concentration	Dose	10-11 kg Dose	Volume	Notes
ASTHMA / ANAPHYLAXIS / CROUP						
Epinephrine (1:1,000)	IM	1 mg/ml	0.01 mg/kg	0.11 mg	0.11 ml	Can also give standardized dosing (similar to Epipen) < 30 kg = 0.15 ml, > 30 kg = 0.3 ml
Racemic Epinephrine	Inhaled	2.25%	N/A	0.5 ml	0.5 ml*	*Located in refrigerator. For stridor, give 0.5 ml Racemic Epi + 3 ml NS via nebulizer.
Albuterol & Albuterol/Ipratropium	Inhaled	0.083%	N/A	3 ml	3 ml*	*Located in med room. Give via nebulizer.
Dexamethasone	IM*/IV/PO	10 mg/ml	0.6 mg/kg	6 mg	0.6 ml	*10 mg/ml preferred for IM. Can use standardized dosing for 7-10kg = 6 mg (0.6 ml).
Dexamethasone	IM/IV/PO	4 mg/ml	0.6 mg/kg	6 mg	1.6 ml	Can use standardized dosing for 7-10kg = 6 mg (1.6 ml).
HYPOGLYCEMIA						
Dextrose D50	IV/IO	50 g/100 ml	1 ml/kg	10.5 ml	See notes	Dilute 10.5 ml D50 w/ additional 10.5 ml saline to make D25. Total volume = 21 ml
Dextrose D10	IV/IO	10 g/100 ml	5 ml/kg	55 ml	55 ml	
RESUSCITATION						
Adenosine	IV/IO	6 mg/2 ml	0.1 mg/kg	1 mg	0.35 ml	Give rapid IV push via large bore IV, followed by saline flush. 2nd dose: 2.1 mg = 0.7 ml
Atropine	IV/IO	0.1 mg/ml	0.02 mg/kg	0.21 mg	2.1 ml	
Epinephrine (1:10,000) Pulseless Arrest	IV/IO	0.1 mg/ml	0.01 mg/kg	0.1 mg	1 ml	Pulseless arrest
OPIATE OVERDOSE						
Naloxone	IM/IV/IO	1 mg/ml	0.1 mg/kg	1 mg	1 ml	Opiate overdose reversal
SEIZURE						
Midazolam	IN/IM	5 mg/ml	0.2 mg/kg	2.1 mg	0.42 ml	Seizure dosing
SEPSIS / SHOCK						
Ceftriaxone	IM*/IV/IO	See note	100 mg/kg	1000 mg	See notes	***IM easier to administer than IV.*** See Ceftriaxone guideline in Practice Guidelines binder for detalis.
Solucortef (adrenal crisis)	IM/IV	250 mg/2 ml	1-2 mg/kg	20 mg	0.16 ml	Saline + powder in same bottle. Push down on red cap to mix saline & powder. Shake well, then withdraw 0.16 ml = 20 mg.
Saline Bolus	IO/IV	0.9%	20 ml/kg	200 ml	200 ml	Can repeat x 3 until perfusion improves. Consider 10 ml/kg bolus if cardiac pathology or DKA.
ET Tube	**Size 4.0 uncuffed, 3.5 cuffed. Length 11 - 12 cm (at lips). LMA size #2. BVM preferred in UC setting.**					

Pediatrics
Care when you need us.

10 - 11 KG

Name:

DOB:

Medical Condition:

Time		HR	RR	BP	O2 sat	Temp	Medication(mg, route)	Notes

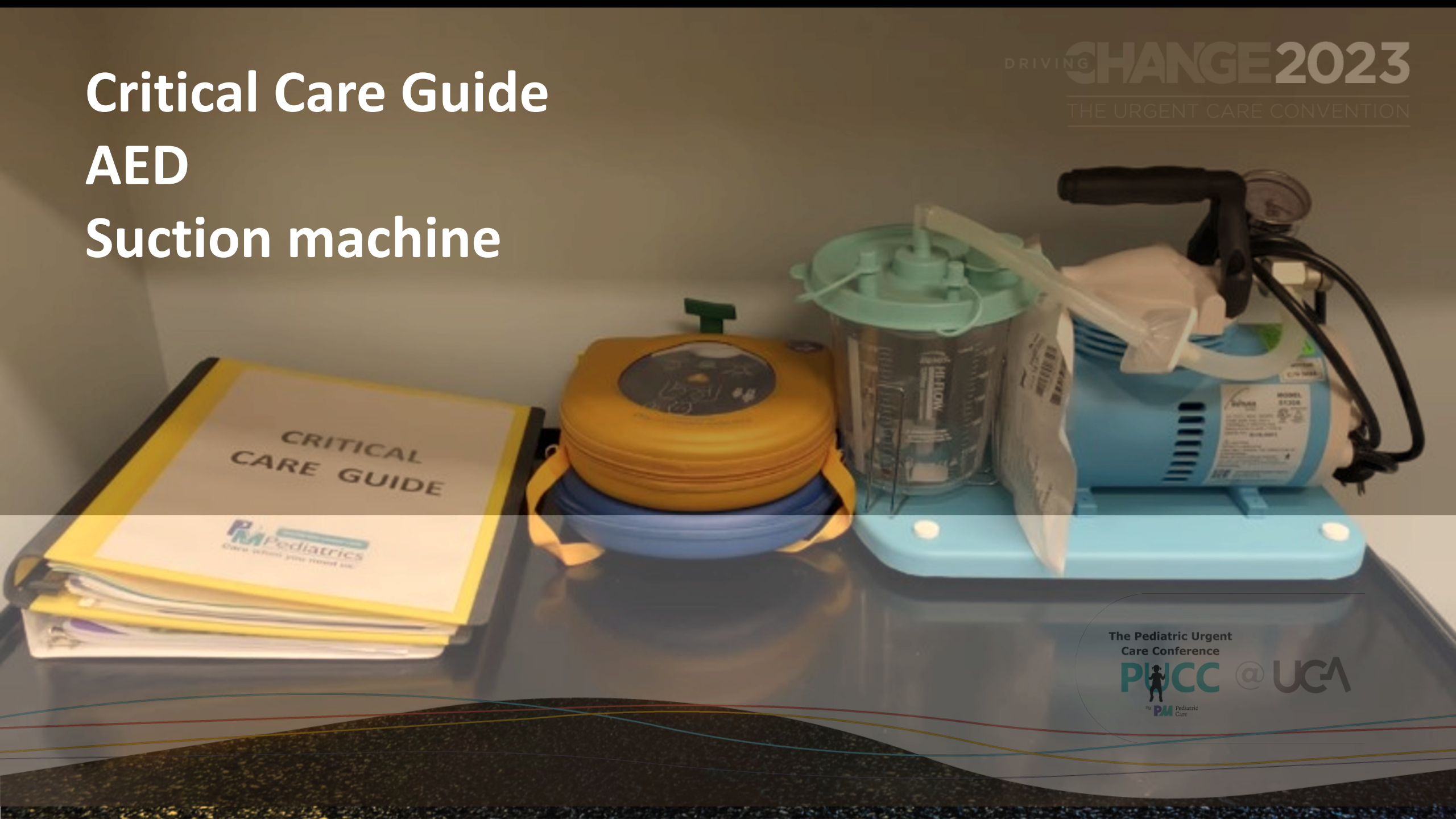
Disposition:

Transport via: EMS CCMC Car

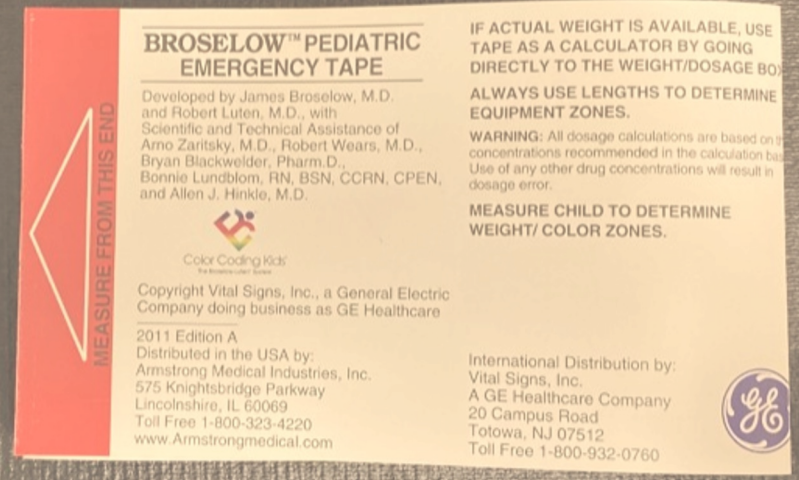
Emergency Preparedness Program

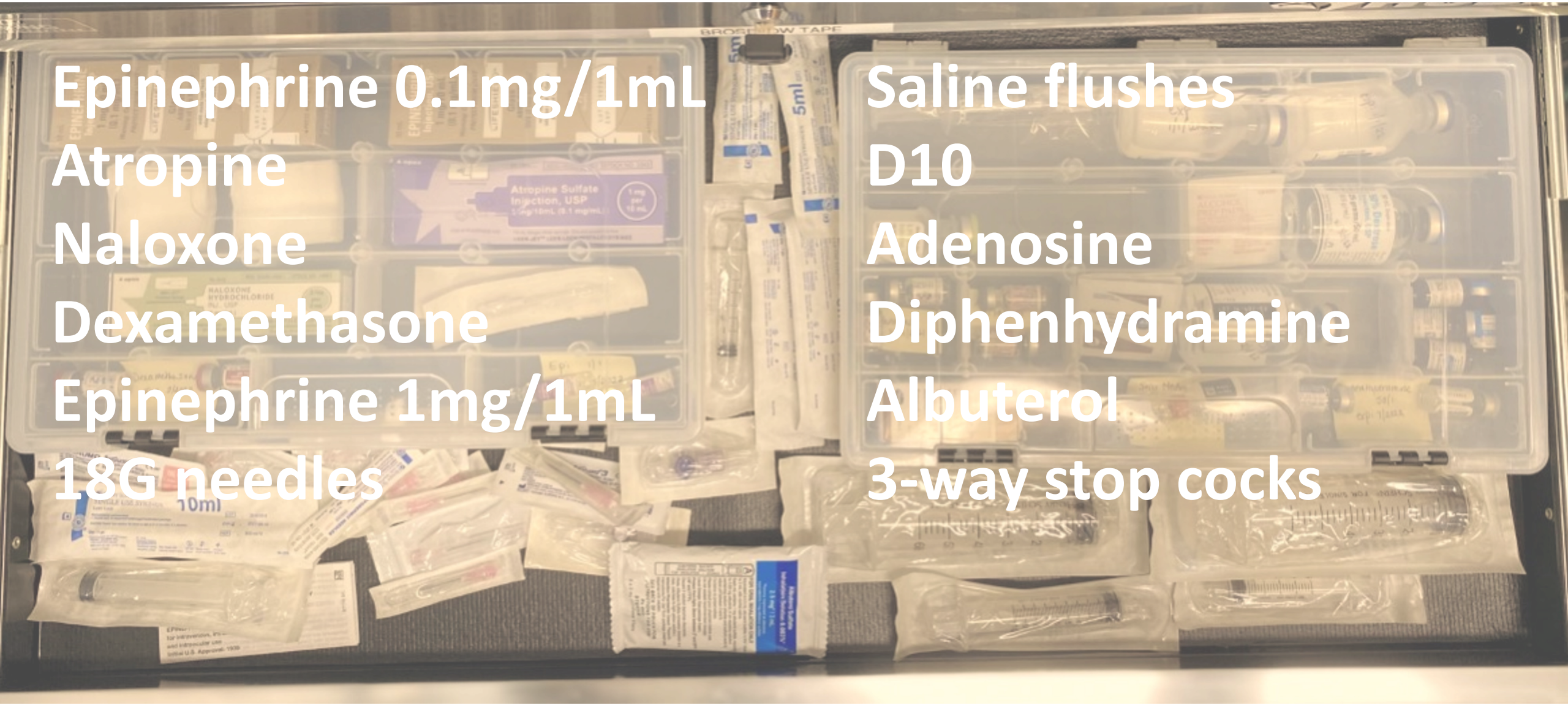
Simulation Trainer's Guide

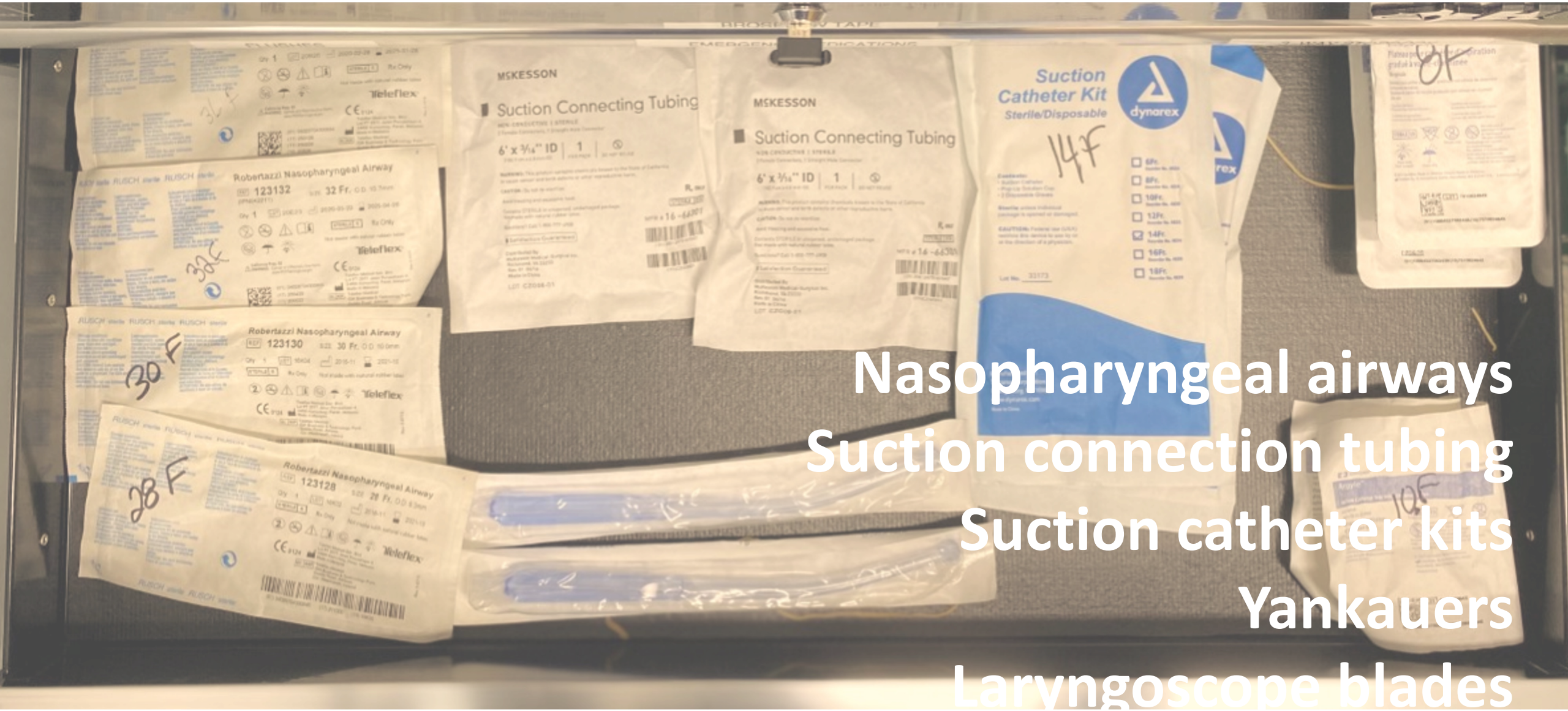
Critical Care Guide
AED
Suction machine



Broselow tape




Epinephrine 0.1mg/1mL
Atropine
Naloxone
Dexamethasone
Epinephrine 1mg/1mL
18G needles
Saline flushes
D10
Adenosine
Diphenhydramine
Albuterol
3-way stop cocks


Nasopharyngeal airways
Suction connection tubing
Suction catheter kits
Yankauers
Laryngoscope blades

Nasal canula
Oxygen masks
Non-rebreathers
Various sizes available


EMERGENCY MEDICATIONS
LarySeal
Laryngeal Mask Airway
Flexicare
SIZE 4
LMA
SINGLE USE
SIZE 2.5
SIZE 2
Oropharyngeal airways
Cuff inflater
LMAs
Various sizes available


IV Start kits
1L NS bag
IV tubing
IO needles
Blood culture bottles
BVMs
IO
Needle
CareFusion

Receptionist

- Identify critically ill patient on arrival and alert team
- Can help transfer patient to treatment room
- Complete EMS call sheet to activate EMS or 911 once prompted by provider
- Alert other patients that there may be a delay in care

MA

- Locate and bring code cart to resuscitation
- Assist in procedures when needed
- Can locate and obtain equipment if needed
- Alert other patients in office that there may be a delay in care during emergency
- Can obtain vitals

Nurse/UC Tech

- Assist in transfer of patient to treatment room
- Establish IV access (if needed)
- Draw up and deliver medications / IVF

XRT

- Clear treatment room (if occupied)
- Record all pertinent data and medications given
- Can obtain vitals
- Assume Reception or MA duties if one not present

Provider

- **Team leader** – all communication routes through the team leader
- Initial assessment and alert staff to notify if EMS is needed
- Direct and administer care
- Will incorporate nursing roles if nurse not present

Receptionist/MA/XRT

- Identify and alert team to critically ill patient
- Helps to transfer patient to treatment room
- Notify other patients of critical patient and delay
- Complete call sheet, activate EMS
- Bring code cart, O_2, other equipment
- Set up any necessary equipment
- Can help with vitals
- Complete EMS call sheet and activate EMS (or XRT)

Nurse/UC Tech

- IV/IO Access, draw up meds
- Clears treatment room if needed
- Records
- Obtain vitals
- Can help with equipment
- Complete EMS call sheet and activate EMS (or MA)

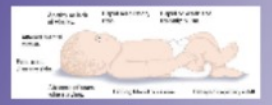
Provider

- **Team Leader** – All communication routed through team leader, medical decision making and administering care
- Initial Assessment – ABCs
- Incorporate nursing roles if no nurse present (draw up and administer medications, direct O_2, assist with IV/IO if needed)
- Alert staff to notify EMS if needed

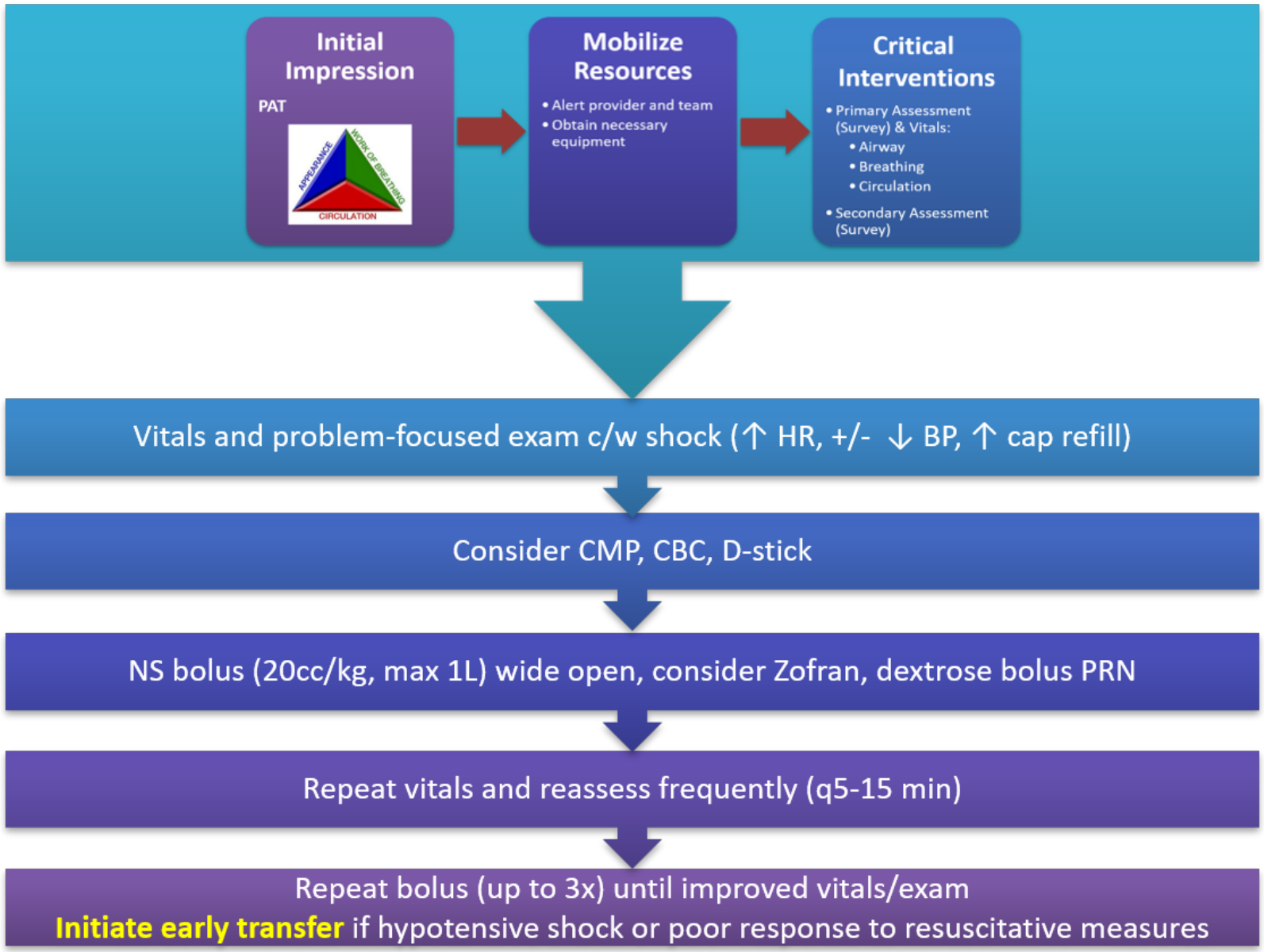
Patients Requiring Immediate Evaluation

v10.6.21

If you see any of these conditions, the patient should be brought back to the patient area and evaluated by a provider or nurse IMMEDIATELY. If the patient has a critical emergency, call 911 AFTER discussion with the provider.

Signs/Symptoms	Reference Images
Difficulty Breathing *(flared nostrils, skin pulls in at neck and chest, belly breathing, blue lips, breathing fast, frightened look)*	
SEVERE Allergic Reaction *(hives, swollen lips, trouble breathing)*	
Signs of Shock *(pale or mottled skin, lethargy, high fever)*	
Suspected Button Battery Ingestion *(vomiting/drooling, throat/abdominal pain, trouble breathing)*	
Altered Mental Status *(confusion, extreme drowsiness, lethargy)*	
Severe Pain, Groin Pain *(abdominal pain, chest pain, headache, deformed fracture)*	 
Syncope *(fainting)*	
Seizures *(recent, active)*	
Dangerous Contagious Disease *(Measles, Ebola)*	 
Immunocompromised *(cancer)* **Fever in < 3 months**	 

Disclaimer: This information should serve only as a guideline and is not a substitute for sound judgment. Always consult a provider or nurse with any questions/ concerns.


Initial Impression
PAT
APPEARANCE
WORK OF BREATHING
CIRCULATION
Mobilize Resources
• Alert provider and team
• Obtain necessary equipment
Critical Interventions
• Primary Assessment (Survey) & Vitals:
• Airway
• Breathing
• Circulation
• Secondary Assessment (Survey)
Vitals and problem-focused exam c/w shock (↑ HR, +/- ↓ BP, ↑ cap refill)
Consider CMP, CBC, D-stick
NS bolus (20cc/kg, max 1L) wide open, consider Zofran, dextrose bolus PRN
Repeat vitals and reassess frequently (q5-15 min)
Repeat bolus (up to 3x) until improved vitals/exam
Initiate early transfer if hypotensive shock or poor response to resuscitative measures

Initial Impression

PAT

Mobilize Resources

- Alert provider and team
- Obtain necessary equipment

Critical Interventions

- Primary Assessment (Survey) & Vitals:
  - Airway
  - Breathing
  - Circulation
- Secondary Assessment (Survey)

Vitals and problem-focused exam c/w shock
(tachycardia, flash cap refill, bounding pulses, warm skin, fever, s/s of anaphylaxis)

Anaphylaxis Kit, consider CMP, CBC, D-stick, cultures if sepsis suspected

NS Bolus (20mL/kg) to max 80/kg; if sepsis, IV/IM **ceftriaxone** (50mg/kg, max 1g; early is key)
If anaphylaxis, **Epi IM** (0.15mg<30kg, 0.3mg if >30kg), antipyretics PRN

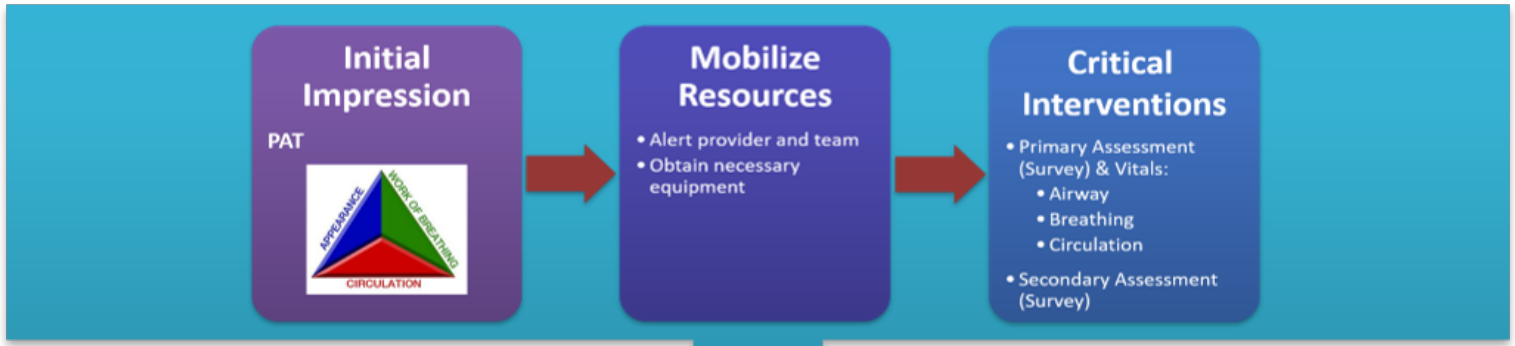
Repeat vitals and reassess frequently (q5-15 min)

Repeat bolus (up to 3x) until improved vitals/exam, **transfer** if no improvement
If anaphylaxis, **TRANSFER** if no/poor improvement, ↓ BP, or need to repeat Epi

Adjunctive Anaphylaxis Interventions

diphenhydramine	•1-1.25mg/kg, max 50mg IM/IV/PO
dexamethasone	•0.6mg/kg IM/IV/PO; max 16mg
cetirizine	•10mg >6yo, 5mg <5yo •Only if able to take PO
Nebulizer treatment	•Racemic epinephrine (0.5mg in 3mL NS) if stridor •Albuterol (2.5mg/3mL) if wheezing

****Low BP in context of anaphylaxis can be ominous – watch closely****



Vitals and problem-focused exam c/w shock (↑↑ HR, ↑ cap refill, possible crackles, palpable liver edge, pedal edema, gallop rhythm, murmur)

If SVT suspected, vagal maneuvers (ice, bearing down, etc.), EKG if stable
Adenosine (0.1mg/kg, max 6mg, 2nd /3rd dose PRN 0.2mg/kg, max 12mg)

NS bolus (**10mL**/kg) over 30 min – LOW AND SLOW

Repeat vitals and reassess frequently (q5-15 min)

Repeat bolus (up to 3x) until improved vitals/exam
INITIATE EARLY TRANSFER

Initial Impression

PAT

Mobilize Resources

- Alert provider and team
- Obtain necessary equipment

Critical Interventions

- Primary Assessment (Survey) & Vitals:
  - Airway
  - Breathing
  - Circulation
- Secondary Assessment (Survey)

Vitals and problem-focused exam c/w shock (tachycardia, muffled heart sounds, dyspnea, tachypnea, absent breath sounds unilaterally, possible tracheal deviation, h/o trauma)

If tracheal deviation, needle decompression, O_2 and IV/IO access
Unless stable, do not attempt CXR

NS bolus 20mL/kg

INITIATE IMMEDIATE TRANSFER

Stable Bradycardia

DRIVING CHANGE 2023
THE URGEN NTION

Initial Impression

PAT

Mobilize Resources

- Alert provider and team
- Obtain necessary equipment

Critical Interventions

- Primary Assessment (Survey) & Vitals:
  - Airway
  - Breathing
  - Circulation
- Secondary Assessment (Survey)

If symptomatic and/or other abnormal vitals, follow

Unstable Bradycardia Pathway

Problem-based exam & obtain EKG. If Mobitz II or 3rd degree heart-block, **initiate transfer**

If nl EKG, healthy, and asymptomatic with nl exam, then no intervention

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PUCC @ UCA
By PM Pediatric Care

Unstable Bradycardia

Initial Impression

PAT

Mobilize Resources

- Alert provider and team
- Obtain necessary equipment

Critical Interventions

- Primary Assessment (Survey) & Vitals:
  - Airway
  - Breathing
  - Circulation
- Secondary Assessment (Survey)

Vitals and problem-focused exam/assessment (↓ HR, ↓ SpO_2, hypotension)

HR <60, ↓BP, ↓ SpO_2 with AMS = **Initiate CPR and attach AED, TRANSFER**

Epinephrine 0.01 mg/kg (0.1 mg/mL) q3-5min

Identify and treat reversible causes (H's and T's)

Reassess & intervene as necessary

Remember to **INITIATE EARLY TRANSFER!**

Stable Tachycardia

DRIVING CHANGE 2023
THE URGENT CARE CONVENTION

Initial Impression

PAT

Mobilize Resources

- Alert provider and team
- Obtain necessary equipment

Critical Interventions

- Primary Assessment (Survey) & Vitals:
  - Airway
  - Breathing
  - Circulation
- Secondary Assessment (Survey)

Problem-focused exam/assessment

If symptomatic and/or other abnormal vitals, follow **Unstable Tachycardia Pathway**

If no distress or impaired perfusion and HR > 180 (>220 if infant) consider stable SVT (see SVT Management) or stable ventricular tachycardia
Obtain EKG
INITIATE TRANSFER

If HR <180 (<220 if infant) and history c/w non-cardiac cause of tachycardia (e.g., fever, pain, dehydration, anxiety), probable sinus tachycardia
Intervene accordingly and reassess

If SVT, perform vagal maneuvers, establish antecubital IV access, and attach 3-way stop-cock for adenosine
Identify and treat reversible causes (H's & T's)
If stable ventricular tachycardia, immediate transfer

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Unstable Tachycardia

Initial Impression

PAT

Mobilize Resources

- Alert provider and team
- Obtain necessary equipment

Critical Interventions

- Primary Assessment (Survey) & Vitals:
  - Airway
  - Breathing
  - Circulation
- Secondary Assessment (Survey)

Vitals and problem-focused exam/assessment (↑ HR, ↓ BP)

Once airway and breathing secured, consider EKG.
If SVT, perform vagal maneuvers and administer adenosine (per SVT Management)
Identify and treat reversible causes (H's & T's)

Immediate Transfer

If unresponsive, check pulse, **initiate CPR** if pulseless, **attach AED** and follow

Unresponsive Patient Pathway

Unresponsive Patient

+ RR
+ pulse

No RR
+ pulse

No RR
No pulse

START CPR
ATTACH AED

NO SHOCK ADVISED

SHOCK ADVISED

H + T's
(hypoglycemia, ingestion, seizing or post-ictal, etc.)
ABC'S + TRANSFER

Follow Respiratory Pathway
ABC'S + TRANSFER

Likely PEA/Asystole:
Continue CPR, AED + epinephrine
ABC'S + TRANSFER

Likely V-Fib, Pulseless V-Tach:
Continue CPR, AED + epinephrine
ABC'S + TRANSFER

Simulation Program at PMPC

The impetus

Framework of the simulation program

Purpose:

Familiarize staff with their roles, medications,& equipment used in our setting

Reinforce PALS and BLS skills

Problem:

Palpable disconnect between PALS skills & simulations

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Session Evaluation

DRIVING CHANGE 2023
THE URGENT CARE CONVENTION

- Your feedback is valuable, take a moment to complete the survey for this session.
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