NORTHWEST HEALTHCARE
Response Network

Planning and Caring for Pediatric and Neonatal Patients in Disasters

Inpatient and Outpatient Guidelines

Created by Northwest Healthcare Response Network Pediatric Workgroup

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Introduction

Background

Pediatric planning in King County has occurred in several locations throughout the county for many years. However, in 2008 with the development of the Pediatric Triage Task Force, coordinated and directed pediatric disaster planning began in earnest. This led to the development and publication of "Hospital Guidelines for Pediatric Patients in Disaster," (also known as the 'Pediatric Toolkit') released in King County in 2010. As this concept grew to include other neighboring counties, it was evident there existed a need for more focused pediatric preparedness.

In 2011 the Northwest Healthcare Response Network (NWHRN) developed and provided an annual Pediatric Disaster Workshop for several years. These one-day events were held initially in the Seattle area, but as interest grew and the Pediatric Toolkit was distributed widely, these workshops occurred throughout the state of Washington. These Pediatric focused educational outreach forums persist today as part of regional Trauma Conferences where "Pediatric Disaster Tracks" have become a regular addition to the curriculum. These forums provide opportunities for pediatric disaster planning and are valuable clinical updates on current practices for the care of the acutely ill and injured child

In a large-scale medical emergency, critically ill or injured children will present to any healthcare facilities. This will include hospitals or clinics that are closest, most convenient or most familiar and not specific pediatric specialty centers.

Although many basic principles developed in the original Pediatric Toolkit still apply, gaps have been identified and updates needed. Therefore, the Pediatric Workgroup, under the administration of the NWHRN, was reconvened in 2018. Members of the Pediatric Workgroup are listed above and represent clinicians in emergency medicine, critical care, neonatology, outpatient clinic practices and pediatric nursing.

In reviewing the most recent Washington state census number, children under the age of 18 still represent approximately 25% of our population.[1] And the geographic disparity between location of resources and pediatric population density persists as was initially defined by King, et al.[2] (i.e. most of the children reside outside of the regions where most of the pediatric healthcare expertise and inpatient beds exist.)

Therefore, the Workgroup continues to support the basic premise that in a large-scale medical emergency (either a no-notice event such as an earthquake or prolonged event such as a pandemic), critically ill or injured children will present to any and all healthcare facilities. This will include hospitals or clinics that are closest, most convenient or most familiar. The ability to access specialized pediatric hospitals or clinics in the greater Puget Sound area may be impossible due to a shortage of vehicles, impassable roads and bridges or the instability of the patient. In addition, specialized hospitals may be unable to receive patients due to overwhelmed capacity or structural damage.

This resource is meant to provide planning guidance for all healthcare facilities, but with a special focus on non-pediatric specialty facilities. It is designed to assist in creating a pediatric disaster plan which can then be integrated into any comprehensive facility disaster plan. This Toolkit is certainly not a comprehensive guide to the care of the newborn or pediatric patient. The intent is to assist facilities in their planning, to hopefully streamline the process and to provide resources to address each facility's unique challenges.

The Workgroup has reviewed multiple peer reviewed publications as well as other sources from established professional organizations (e.g. AAP, ACEP, ASPR, CDC), other state and national pediatric plans and multiple other pediatric resources during the update process. Footnotes and resources are listed on the Resource page. Recommendations provided are evidence-based and/or based on best practices by experts in their field.

NOTE: Weblinks expire over time, therefore when possible and available hard copies of all documents linked in this Toolkit can be found in the Attachments section.

Section 1: In-patient Preparedness Recommendations

A. In-patient Planning for Pediatrics Patients during a Disaster

General Guidelines

BASIC ASSUMPTION: All Healthcare Facilities should have a disaster plan which at minimum, meets the 2016 (updated in 9/2019) CMS preparedness requirements.[3] Specific requirements vary depending on type of healthcare institution. Managing potential patient surge during a disaster is understood as an important responsibility of all healthcare facilities.

In addition: All in-patient healthcare facilities should plan for arrival of pediatric patients

As mentioned in the Introduction,

- Pediatric patients might present to ANY hospital.
- Critically ill pediatric patients might present to ANY hospital
- Transfer of patients to specialized hospitals might not be feasible

Studies have shown that those institutions who have designated pediatric physician and nurse champions, as well as a QA/QI system for monitoring pediatric care, are much more likely to develop and maintain pediatric disaster plans.[4]

Following is a brief overview of the steps needed to develop a strong pediatric disaster plan. Later sections in this Toolkit provide more detail, both clinical and operational, to help develop and prepare for pediatric emergencies.

9 Steps for Pediatric Planning

1. Survey staff to identify in-house newborn and pediatric expertise:

- Survey all clinical staff to develop a database of personnel with pediatric experience, training and willingness to join a pediatric planning committee and response team.
- Maintain a roster of pediatric planning committee and response team individuals, including important contact information. Develop processes to keep this information updated and available in both electronic and hard copies.
- Identify key pediatric positions that staff will occupy in a disaster (See #2 below).
- Develop notification procedures for key staff and response team members

2. Develop the following roles and responsibilities:

The following responsibilities are key for successful pediatric planning and response. These roles should be defined during planning and qualified staff appointed to fill these roles during a response. Job Action Sheets have been created for each position. *(See Attachment 1-A)* It is recognized that many facilities may not have enough staff or expertise to designate a specific person for each role. The primary goal is not to have a person for each position, but to have all the appropriate areas of responsibility considered and addressed.

It is recommended that the general Hospital Disaster Preparedness Committee contain at least one individual with pediatric experience or interest.

Pediatric Physician Coordinator

- coordinates physician responsibilities in pediatric disaster planning and response

Pediatric Nursing Coordinator

- coordinates nursing responsibilities in pediatric disaster planning and response

Pediatric Safe Area Coordinator

- ensures the pediatric safe area is properly staffed and stocked for an emergency
- ensures the safety of children awaiting appropriate disposition

Pediatric Logistics Unit Leader

- ensures that there are appropriate supplies available to address the special medical needs of children during an emergency

3. Increase pediatric and disaster training, drills and exercises:

- Encourage and support pediatric specific training for non-pediatric providers in order to provide appropriate basic emergency care and trauma life support to newborns and children. See Table 1-1 for specific training and education recommendations.
- Recommend including at least one pediatric patient in every hospital drill or exercise
- Recommend adopting routine pediatric mock codes, led by identified key in-house pediatric expertise
- Recommend developing a QA/QI system for monitoring pediatric care.

Table 1-1: Pediatric Training Recommendations

Provider Level	Recommended Training				Include Pediatric Pts in disaster drills
	NRP	ATLS	PALS/ ENPC	Basic Disaster Training **	
Emergency Department Nurses & Physicians	Yes (high risk)	Yes	Yes	Yes	Yes
Pediatric Inpatient Unit Nurses & Physicians	Yes (high risk)	No	Yes	Yes	Yes
Pediatric ICU Nurses & Physicians	Yes (high risk)	No	Yes	Yes	Yes
Pediatric Surge Capacity Nurses & Physicians*	Yes (low risk)	No	Yes	Yes	Yes
Medical/Surgical ICU Nurses & Physicians plus PACU staff	Yes (low risk)	No	Yes	Yes	Yes
Other Surgical & Medical Physicians likely to respond to ED during disasters	Yes (low risk)	Yes	Yes	Yes	Yes

**Staff designated in the hospital disaster plan to care for pediatric patients and their families. In a facility that does not primarily care for children this would be the staff identified in Step 1 above.*

*** Recommended Basic Disaster Training to include: Knowledge of HICS, knowledge of hospital disaster plans, know hospital Emergency Manager and location of EOC, participate in hospital preparedness committee, exercises and drills.*

4. Plan for appropriate pediatric equipment and pharmaceuticals:

- Consider creating and stocking pediatric "emergency carts" in critical designated areas (e.g., emergency departments, operating rooms, radiology, in-patient wards), which would include basic pediatric supplies, especially those needed for emergent resuscitation.
- Recommend the length-based color-coded system (e.g. Broselow) for pediatric equipment and pharmaceutical dosing. This type of system has been shown to decrease cognitive load, increase safety and reduce errors in pediatric care.[5] There are numerous examples of how color coding can be used in pediatric care. *(See Attachment 1-B)*
- Establish procedures for maintaining pediatric supplies.
- Maintain and update an inventory of essential drugs.
- Consider establishing MOU's with nearby commercial pharmacies for pediatric specific medications and formulations (i.e. chewable, liquid formulations, special compounding procedures, etc.).

5. Plan for appropriate pediatric nutrition and non-medical supplies:

Maintain a five-day food and drinking water supply for use during an emergency, including age-appropriate nutritional supplies for both healthy children and those with special dietary needs. Consider Memoranda of Understanding with area stores for food and non-medical supplies (e.g. diapers, formulas, bottles, etc.)

6. Plan for special security needs of children:

- Plan a Pediatric Safe Area (PSA) to hold uninjured, displaced or released children who are awaiting adult caregivers.

- Plan for the security and safety for both pediatric patients and non-patients.
- Designate a PSA Coordinator as part of this planning and provide resources, Job Action Sheets and checklists outlining procedures for setting up and maintaining the PSA.
- Develop a system to track both accompanied and unaccompanied children.
- Develop a protocol to rapidly identify and protect displaced children, including recording key identifying information for use in later tracking and reunification with caregivers.

7. Plan for transport issues:

In case transfer is delayed, prepare to provide extended care to children during a disaster.

Non-pediatric hospitals should maintain contact lists for general pediatric and subspecialty pediatric consultation by phone or Telehealth to assist in the care and appropriate transport of pediatric patients.

8. Add special considerations for children to your Hospital Decontamination Plan:

- Develop a system to keep children with their caregiver, unless medical issues take priority.
- Consider incorporating a low-pressure, warm water delivery system that is "child-friendly" into the hospital decontamination showers.
- Minimize risk of hypothermia.

9. Include pediatric considerations in your hospital-based disaster triage system:

- Establish treatment and evaluation areas that are separate from ED critical areas for lower priority patients.
- Use clinicians who are accustomed to evaluating acutely ill or injured children, when possible.
- See Pediatric Surge Guidelines for primary triage and initial evaluation recommendations for the care of the pediatric patient.

B. Equipment Needs for Pediatric Patients During Disasters

Maintaining appropriate supplies and equipment is essential for pediatric preparedness. There are numerous checklists available which outline supplies[6] needed. However, it is also important to organize these supplies such that they can be easily accessed and provide meaningful assistance in times of emergency. Consider assembling length-based color-coded bags (e.g., Broselow™) with 1 set of color -appropriate equipment in each bag. *(See Attachment 1-B for examples)* Having supplies organized in this way provides easy access to the correct supplies needed at the time they are needed.

Table 1-2: Equipment Needs for Pediatric Patients During Disasters

Type	Size
Ambu bags & clear masks self-inflating bag	Neonatal, Infant
	Child
Arm boards	
Blood pressure cuffs	Infant
	Small child
Butterfly needles	22g 25g
Chest tubes & set-up Pigtail catheters 7F and 8.5F	16F
	28F
Defibrillator pads	Pediatric
Dosing chart, color-coded	Pediatric
EKG electrodes	Neonatal
	Pediatric
$ETCO_2$ Colorimetric Detectors	
ET tubes (uncuffed)	2.0mm – 3.5 mm
ET tubes (cuffed)	3.0mm-7.5mm
ETT Stylets	2.5-7.5 (non-essential)
Foley catheters	8F
	10F
	12F
Infant scale	
Intraosseous needles	45mm (adolescent) 25mm (>40kg) 15mm (<40kg)
Intravenous infusion pumps	
Laryngoscope blades	Macintosh 0
	Macintosh 1
	Macintosh 2
	Miller 0
	Miller 1
	Miller 2
Laryngoscope handles	
LMA's	Sizes 1,2,3
Masks: non-rebreather	Infant
	Child

Type	Size
Nasal cannula	Infant
	Child
Nasogastric tubes	6F
	8F
	10F
	12F
Nasopharyngeal airway	All peds sizes
Newborn kit/OB kit	
Oral airways	00
	01
IV catheters	20
	22
	24
External heat source for neonates (e.g. radiant warmers, warm packs	
Peds MDI spacers w/masks	Sm, med, lg child
Oximeters	
Oxygen saturation probes	Pediatric Neonatal
Resuscitation tape, length-based (such as Broselow™)	
Central line vascular access kit	4F, 5 cm (consider)
	5F, 5 cm (consider)
	5F, 8 cm (essential)
Pediatric Semi-rigid cervical spine collars	(S)
	M
	L
Suction catheters	5F
	6F
	8F
Syringes	1, 3, 5 & 10 cc
	60 mL, cath tip
MCI Triage Algorithms	JumpSTART or SALT

C. Pharmacy Needs for Pediatric Patients During Disasters

General Guidelines

- Recommend acquisition of a pediatric pharmacy cart (length-based, color-coded system, such as Broselow™).
- Establish procedures for maintenance of cart to include storage, re-supply and designated responsible point of contact. A copy of these procedures should be reviewed and updated on a scheduled basis and stored electronically, as well as a hard copy kept with the cart.
- Consider establishing patient-specific weight-based code medication sheets with precalculated code medication doses to be kept with each pediatric patient during their hospital stay. Consider keeping a full set of pre-calculated weight-based code medications sheets in a binder as part of the Pediatric Pharmacy Cart. See Attachment 1-B for examples
- **NOTE: ML dose depends on drug concentration in (mg/ml). CONFIRM all drug concentrations before using all color coding Attachments.**
- Maintain 72-hour supply of essential pharmaceuticals. (See Table 1-3)
- Maintain a list on the cart of sources for additional drugs, including system and non-system affiliations, local pharmacies and drug companies.
- Regularly test pediatric pharmacy procedures and pediatric dosing of medications during drills and exercises.
- Consider establishing MOU's with neighboring retail pharmacies specifically including the need for pediatric medications (i.e. liquid and chewable forms or special compounding needs).
- ALL pediatric medications should be dosed on a per kg basis not to exceed maximum adult dosing. Children should always be weighed in kilograms, NOT pounds. Dosing of medications is dependent on the diagnosis. Table 1-3 lists recommended medications inventory for pediatric patients. Please refer to trusted Pediatric drug dosing resources such as The Harriet Lane Handbook or the Lexicomp Pediatric and Neonatal Dosage Handbook and always confirm dosing with your pharmacist.

ALL pediatric medications should be dosed on a per kg basis not to exceed maximum adult dosing. Children should always be weighed in kilograms, NOT pounds.

Table 1-3: Recommended Pediatric Pharmacy Inventory

Emergency Meds	
Albuterol nebulized solution	Insulin infusion
Albuterol MDI with mask and spacer	Keppra
Atrovent (ipratropium)	Ketamine
Atropine sulfate	Lidocaine 2%
Calcium chloride	Lorazepam 2 mg/mL injection 2 mg/mL oral solution
Dexamethasone	Mannitol
Dextrose	Midazolam
Diazepam	Norepinephrine
Diphenhydramine	Ondansetron tabs 4 mg & 8 mg (orally disintegrating tablet)
Dopamine	Phenobarbital
Epinephrine 1:1000 and 1:10000	Phenytoin
Etomidate	Rocuronium
Fosphenytoin	Silver Sulfadiazine cream
Furosemide	

Maintenance fluids	Antibiotics
D5W 0.2%NS + 20 mEq/L KCl	Acyclovir
	Ampicillin
Analgesics	Azithromycin
Acetaminophen oral solution	Cefotaxime
Ibuprofen	Ceftriaxone
Fentanyl	Gentamycin
Lidocaine, Topical (EMLA, LMX)	Piperacillin/Tazobactam
LET (Lidocaine, Epinephrine, Tetracaine	Trimethoprim-Sulfamethoxazole
Morphine	Vancomycin 1 and 5 g injection

**For Chemical, Biologic, Radiologic/Nuclear (CBRN) dosing during outbreak or acute event, consult with local, regional or federal guidelines for antidote and dosing as supply may vary depending on event.*

D. Pediatric Dietary Needs

Maintain a 5-day food supply for pediatric patients for use during an emergency.

Maintain Memoranda of Understanding (MOUs) with nearby retail stores for immediate access to groceries, pharmacies and medical supplies.

Sample pediatric menus are included in the Pediatric Annex. Recommend food items which require minimum preparation time and are easy to store.

New data shows a dramatic increase in the incidence of food allergies of all kinds in children. Taking a complete allergy history (both food and medication) is important. If a child is unaccompanied or is with adults who do not have such knowledge, this should be recorded and the child should be watched closely. Staff should be trained to recognize allergic symptoms and have immediate access to treatment if such symptoms arise.

Table 1-4: Pediatric Dietary Recommendations

Pediatric Dietary Recommendations for Healthy Children			
0-6 months	**6 months to 1 year**	**1 to 2 years**	**2 years and above**
Breast-fed or formula-fed by bottle only. Comments: ● Breast feeding is always encouraged, however, if for some reason the infant cannot be breast fed there may be difficulty transitioning to the bottle. There are multiple other ways to feed infants who are not taking the bottle well to include by cup, syringe, or spoon feeding. ● Recommendation: Ready-to-feed formula is immediately ready for use and requires no refrigeration or preparation. ● Powdered baby formula may be used as well. it will have a longer shelf life but will require a safe water source to reconstitute ● Recommend stocking a combination of both.	6-9 months – ● baby cereal, jarred baby food or mashed table food is appropriate – along with formula or breast milk 9-12 months – ● soft, bite sized pieces of foods, i.e. vegetables, mashed potatoes, and meats – along with formula or breast milk	This age group eats table food. Young children will need soft bite-sized foods – along with milk. ● Avoid foods that can cause choking such as hot dogs, grapes, chunks of meat unless cut in ● pea size pieces Hydration: Water	● This age group eats table food. Young children will need finger foods – along with milk. ● Avoid foods that can cause choking such as hot dogs, grapes, for youngest children. Hydration: Water

Table 1-5: Pediatric Dietary Recommendations Children with Special Needs

Pediatric Dietary Recommendations for Children with Special Needs
Patients with feeding tubes
Nasogastric (N/G) and Orogastric (O/G) • Used for acute hydration issues, gastric decompression, delivery of oral medications and activated charcoal Gastrostomy Tube (GT) or Gastrojejunostomy Tube (GJT) • Used in patients with chronic feeding challenges • Most GT and GJT need specific tubing attachments for feedings. However, if these are unavailable, a smaller diameter NG or OG tube can be placed within most GT to deliver hydration. If a GT or GJT falls out immediately placing a foley catheter of similar size and inflating the balloon will allow access while preventing the tissue tract from closing up. • Administer feeding by bolus or continuous feed pump
Nutrition appropriate for GT or GJT tube feedings by age
Infants (0-12 months): • Regular or specialized Infant formula 12 months and older children: • Resource Just for Kids • PediaSure • Nutren Jr. Adolescents: • An adult enteral product may be appropriate
Hydration
Tap or bottled water
Comments
• The same feeding pump used for adults can also be used for children • Specialty infant formulas: except for specific infant inborn errors of metabolism (e.g. PKU, LCAD, FAMD, etc.) most infants can be fed standard cow or soy-based formulas. • In the acute setting (first 72 hours) maintaining hydration and normal blood sugar levels are the top clinical priorities. • For complex special-needs patients recommend consulting with hospital dietician or pediatric specialist. • Parents of special needs children are usually very educated on the types and ways to feed their child.

E. Hospital Family Information and Support Center (FISC)

Primary functions

- Provide accurate information to family members through statements issued by the hospital's patient information officer.
- Facilitate family access to regional Family Assistance Center's (FAC's) call center.

- Coordinate communication with local law enforcement and FAC.
- Provide psychological first aid to distraught families.
- Provide escort and “comfort” services to families.
- Provide temporary childcare for well children of the injured or of family members who need to assist the injured.
- Assist with patient location and reunification of family within the hospital.
- Assist in contacting family members to arrange care of children present at hospital.
- Assist in making in-place shelter arrangements or community placement of children for those who do not have a safe place to be or a family member who can care for them.
- Provide communications needs for families (phones, e-mail).
- Protect families from intrusion by media or curious bystanders.
- Enable medical staff to concentrate on treatment of casualties.

Families need to be provided with the most up to date information available in a supportive and safe environment. Upon arrival to the FISC, families are logged in either via an electronic database or sign-in book. Registered families are updated periodically with information coming into the FISC. Assign a social worker, or other support staff, to provide the emotional support needed during the added stress of an acute event.

Ideal set-up of FISC

- Large reception area with conveniently located restroom facilities
- Information desk with message center and phone, fax and computer connections
- Photograph/identification room with limited access (close relatives only)
- Private consultation rooms with table, chairs, telephone, tissues, trash can.
- Pediatric Safe Area

Identification of identified or unidentified victims/ family members

- Personal details and pictures of surviving victims are sent to the FISC electronically or via fax or runners from the ED, ICU and EMS.
- Information is included on all unaccompanied children, both the uninjured and those receiving medical treatment.
- Information on deceased victims should be sent to the regional Family Assistance Center and may require involvement of the County Medical Examiner’s Office.
- Adults coming to the hospital to claim children must show I.D.; ideally, they should bring a picture which includes the adult with the child, such as a family photograph.
- Adult family members of victims not reported to the hospital’s FISC should be referred per the regional protocol to a Family Assistance Center or equivalent.

Recommended FISC staffing

- Coordinator
- Trained and pre-screened volunteers
- Patient Information Officer
- Security
- Liaison to regional Family Assistance Center (FAC) of other regional family coordination center
- Translators as needed
- Professional staff (spiritual care, social services)
- Runners

F. Pediatric Surge: General Guidelines

When an event occurs, which may involve a surge of pediatric patients, an inpatient facility may or may not receive any advance notice. An institution may receive information via EMS and base station reports, local news, or as has been seen historically, patient surge will occur without notice. Primary adult hospitals have established adult surge plans. Below are specific recommendations for surge of pediatric patients:

- Activate hospital external disaster plan; communicate closely with facility HICS
- Identify and notify healthcare workers with pediatric clinical expertise
- Identify pediatric equipment and drug dosing guidelines. In non-pediatric institutions recommend keeping these supplies, references and this document together in a pediatric emergency bin or bag.
- Notify important ancillary staff as needed (e.g. respiratory therapists, surgeons and OR, ICU, lab, radiology)
- Prepare for stabilization and transfer as indicated. Notify local DMCC if assistance is needed in coordinating transfers.
- Contact Hospital Control to determine hospitals with pediatric capability/capacity for possible transfer
- Set up a Family Information and Support Center (FISC) and a separate area for media
- Confirm hospital's surge capacity for pediatric patients (number and severity)
- Consider cribs, port-a-cribs or playpens as part of your pediatric emergency equipment.
- If adult beds are only option, use beds with side rails, set a lowest possible height and with electric controls unplugged
- Decontaminate patients upon arrival, as indicated
- Keep appropriate-sized airway supplies readily available for each patient
- Plan for rush of media and anxious parents/family members (4-5 visitors/patient)
- Depending on event: plan for local or regional law enforcement
- Establish a Pediatric Safe Area

Mass Casualty Incident (MCI) Triage

Mass casualty incident (MCI) triage is an important skill to understand, drill and be ready to implement. The basic principle of triage is to identify critical patients quickly in order to save as many lives as possible during a surge of patients.

No notice events either naturally occurring (e.g. earthquakes or hurricanes) or manmade events such as mass shootings or transportation disasters (e.g. airline, train or bus incidents) can produce a rapid influx of ill or injured patients, pediatric as well as adults.

Having the skills to organize and sort patients is key to increasing the chance of survival.

Multiple triage algorithms have been developed to sort patients. The 2 most used for pediatric patients are JumpSTART and SALT. It is important to remember that all algorithms are imperfect and were primarily developed for primary triage in the field, not necessarily secondary triage at the hospital. However, these algorithms provide good guidance on how to sort patients and specifically how to identify those critical patients needing immediate attention.

Both JumpSTART and SALT will place patients in 3 separate categories:

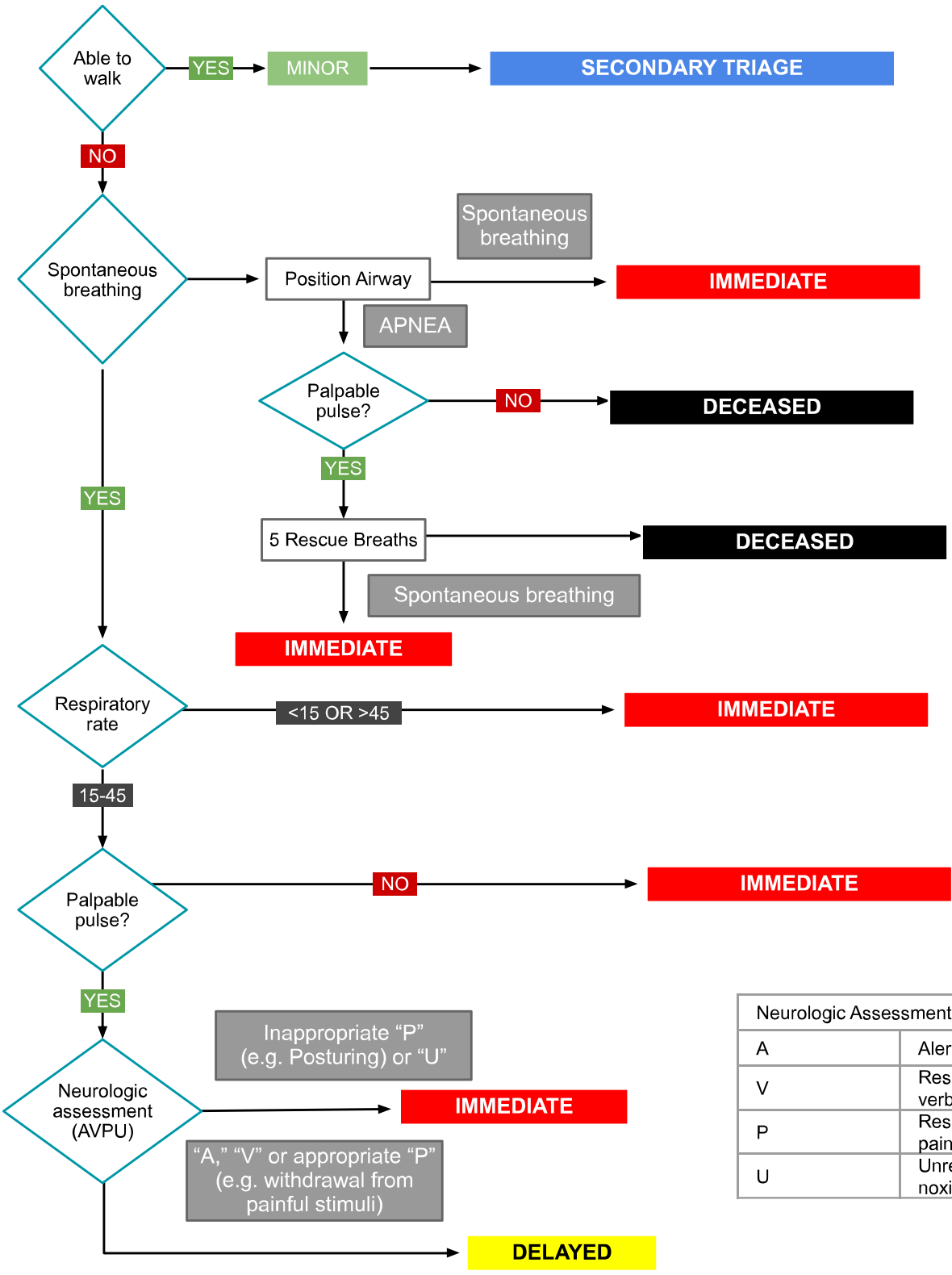
Red-tagged patients (critical/unstable)

Yellow-tagged patients (moderately injured or ill/potentially unstable)

Green-tagged patients (minor or non-injured/stable)

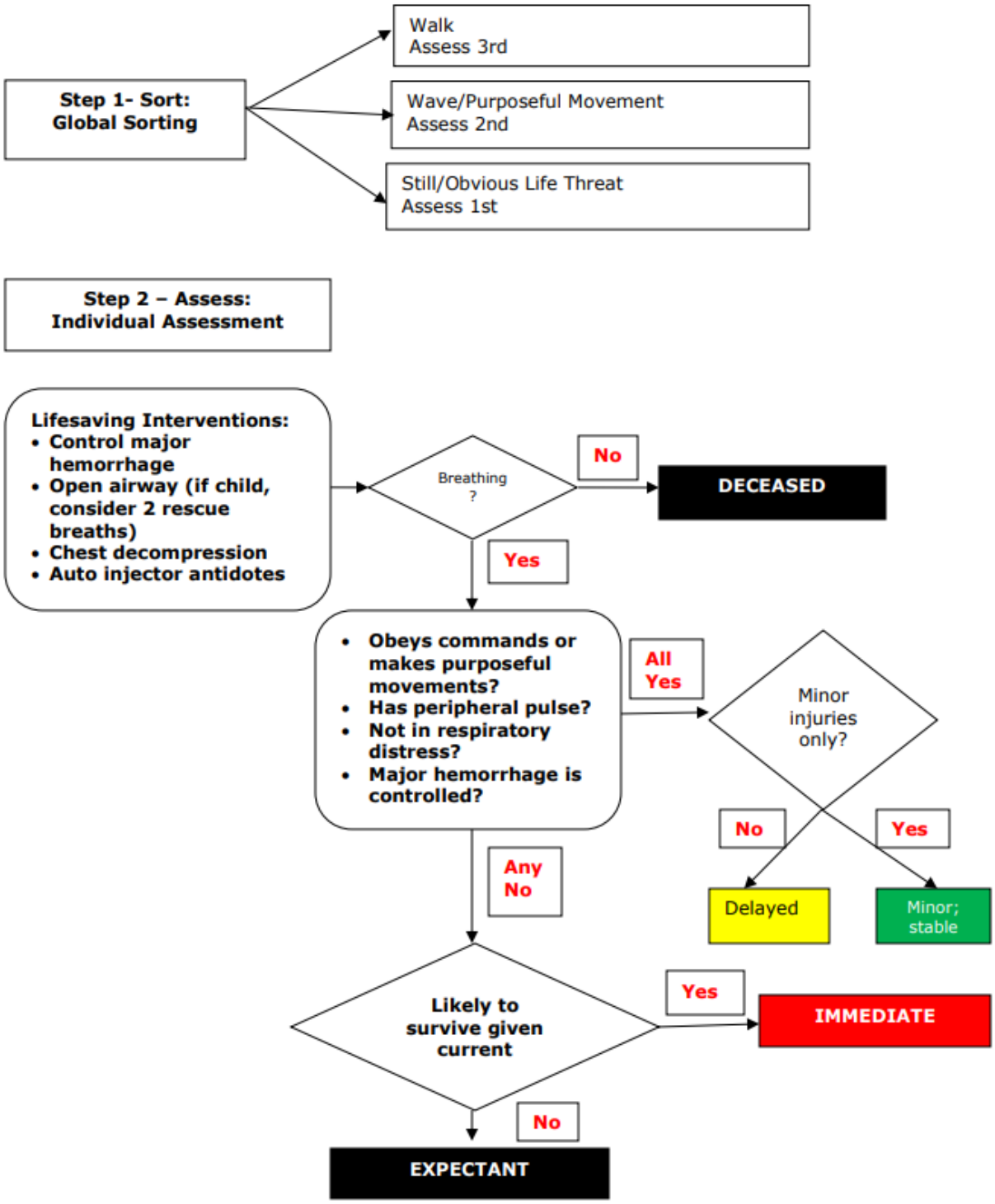
It is recommended to have a printed copy of the triage algorithms below in your Pediatric emergency supply kit. They can be found in Attachment 1-C.

Figure 1-1: JumpSTART Pediatric MCI Triage Algorithm



Neurologic Assessment	
A	Alert
V	Responds to verbal stimuli
P	Responds to painful stimuli
U	Unresponsive to noxious stimuli

Figure 1-2: SALT MCI Triage Algorithm



Appropriate staff should be assigned to each area and plans made for stabilization and definitive care of the ill or injured.

	Red-tagged patients (critical / unstable)	Yellow-tagged patients (moderately injured or ill / potentially unstable)	Green-tagged patients (minor or non-injured / stable)
Staff	Highest level of pediatric expertise. Designate a Unit Leader	High level of pediatric expertise. Designate a Unit Leader	Although it is tempting to put less experienced providers in the "Green Zone", be aware that children can oftentimes appear well but then deteriorate rapidly. The Designated Unit Leader should have some pediatric experience.
Supplies	All critical supplies and medications listed above (Sections 1-B and 1-C) should be available	All critical supplies and medications listed above (Sections 1-B and 1-C) should be available	Basic wound care and orthopedic supplies for the injured patients. Basic out-patient medications or the ability to refer to an out-patient pharmacy.
Tasks	1. Stabilize critically ill and injured children 2. Notify internal surgery and other subspecialists as needed 3. Alert closest pediatric specialty facility and trauma center 4. Alert transportation assets for transfer to specialty facility and prioritize patients for transfer. 5. Start Patient Tracking, especially if this is an unaccompanied minor (see Attachment 1-D) 6. Continually reassess all Red tagged patients.	1. Stabilize moderately ill and injured children 2. Notify internal surgery and other subspecialists as needed 3. Consider the need for transport: Can your facility manage patient's illness and/or injury? If not identify appropriate facility and begin the transfer process. 4. Alert transportation assets for transfer to specialty facility and prioritize patients for transfer. 5. Start Patient Tracking, especially if this is an unaccompanied minor. (See Attachment 1-D) 6. Continually reassess all Yellow tagged patients.	1. Treat and stabilize minor injuries or illnesses 2. Identify those injuries or illnesses that cannot be managed at your facility and identify appropriate referral facility. If transfers are needed, begin the transfer process. 3. Discharge minor and stable injuries or illnesses with appropriate follow-up care if needed 4. Identify any unaccompanied minors and begin the Patient Tracking process (See Attachment 1-D) 5. Continually reassess all Green tagged patients.

Children can oftentimes appear well but then deteriorate rapidly

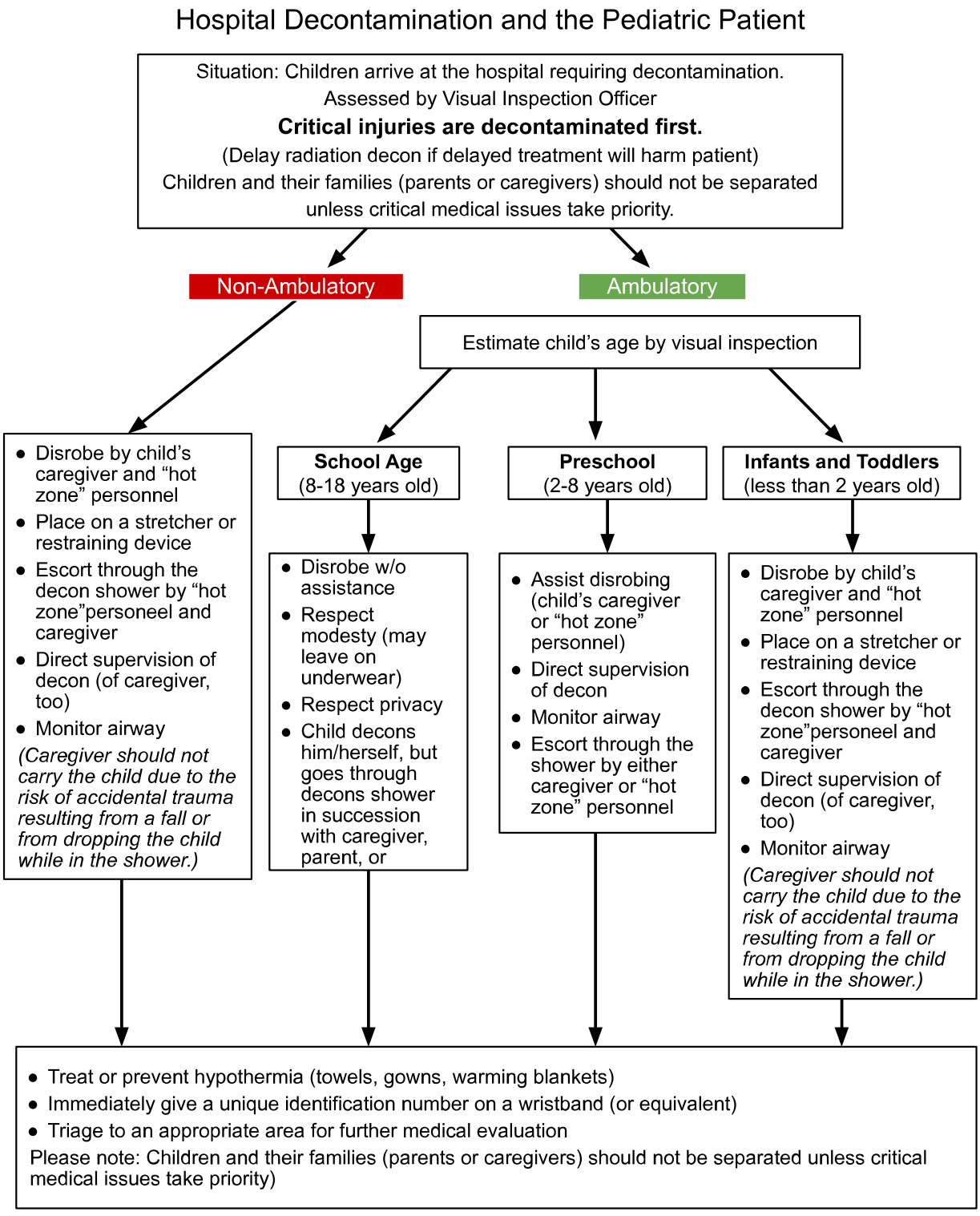
G. Hospital Decontamination and the Pediatric Patient

The hospital or pre-hospital decontamination process is an important first step in treating an acutely ill or injured patient who may have been exposed to a toxic substance that continues to pose a danger to the patient or staff.

However, the decontamination of a pediatric patient must consider 2 important differences from adults:

- The risk of clinically significant hypothermia increases the smaller and younger the child when the water temperature in the decontamination shower is below 98°F (i.e. the risk of hypothermia in a 6-month-old is much higher than in a 6-year-old child.) Consider warm water and low pressure decontamination for children.
- Separation from a caregiver can be traumatic to a child. If possible, try and decontaminate both the caregiver and the child together.

Figure 1-3: Hospital Decontamination and the Pediatric Patient



H. Assessing the Pediatric Patient: Pediatric Assessment Triangle (PAT)

The initial evaluation of children during a disaster must quickly identify those who are critically ill or injured. Early recognition and treatment of a patient with deficiencies in oxygenation, ventilation, or perfusion frequently prevents deterioration to respiratory or cardiac arrest. Outcomes for children who develop cardiopulmonary arrest are poor.

The pediatric assessment triangle (PAT) developed and utilized by the AAP Advanced Pediatric Life Support (APLS) Course[7] is a rapid assessment that relies on three observations to quickly identify a child with respiratory and/or circulatory compromise who requires immediate supportive care and has shown high reliability when used in pre-hospital and hospital settings.[8]

The PAT consists of **ABC**:

Appearance **B**reathing **C**irculatory status

A child who is alert, easily consolable when crying, has good muscle tone, and responds to a caregiver is unlikely to be critically ill. On the other hand, the clinician should be very concerned about an infant who is limp, not interactive, listless, and has a weak cry.

Using a systematic approach ensures that all critical considerations are accounted for when assessing a child. The PAT algorithm also sorts the pediatric patient into the same color-coded categories as the MCI triage (JumpSTART and/or SALT) thus they can be used independently or simultaneously while sorting into the same 3 categories:

RED: Critical or Unstable

YELLOW: Potentially Unstable

GREEN: Stable with Minor injury or Illness.

The Figures below are a reminder of the PAT and its usage. It should not take the place of a full course on pediatric assessment.

Figure 1-4: PAT Algorithm

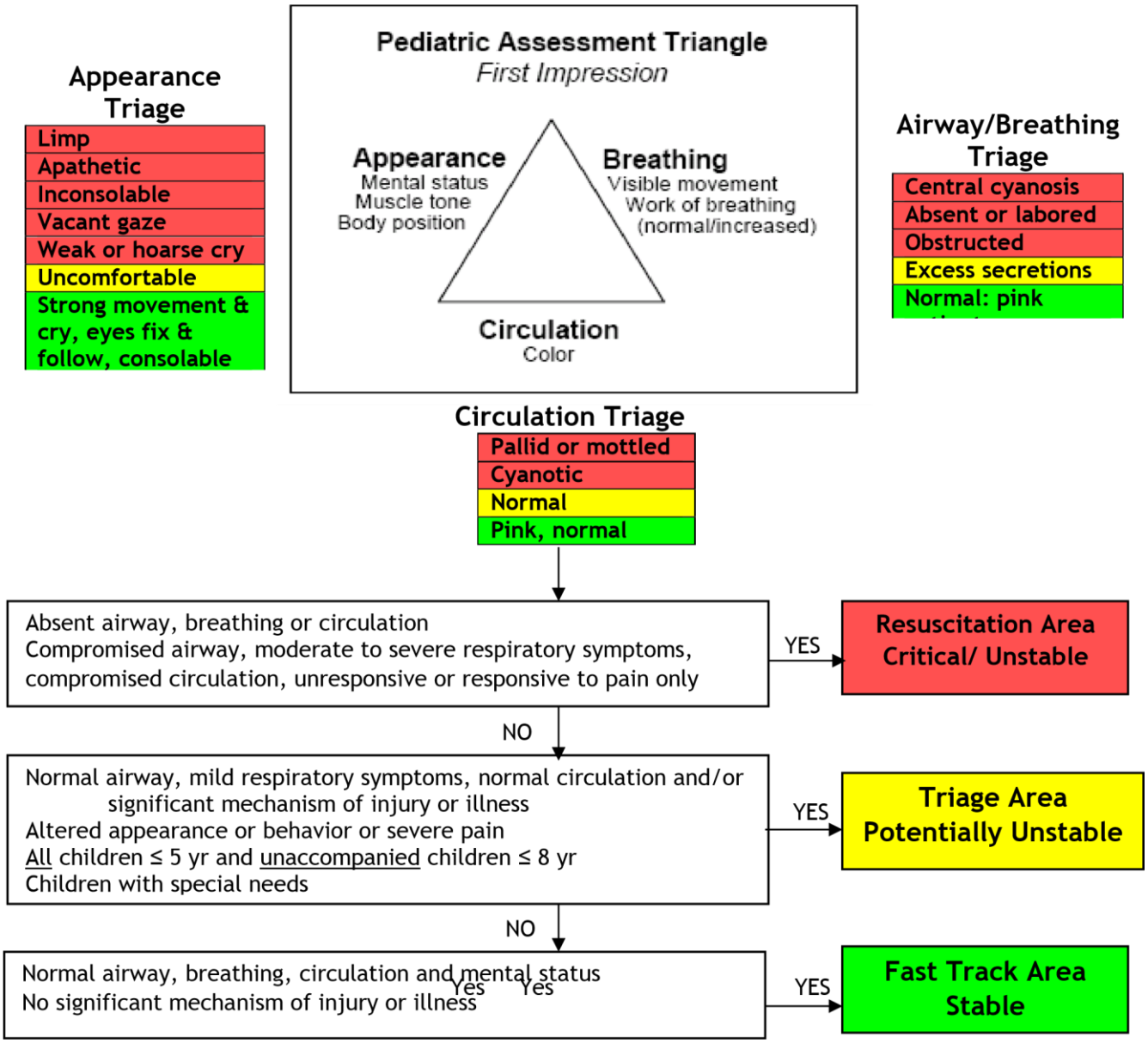


Figure 1-5: **ABC** of Pediatric Assessment

Appearance		
Assessment	**Unstable or Potentially Unstable**	**Stable**
Tone	Limp	Vigorous movement with good muscle tone
Interactivity	Apathetic; will not reach for a toy or respond to people, objects and sounds	Will reach for a toy; is alert and attentive to surroundings
Consolability	Agitated and crying; cannot be comforted	Responds to soothing
Look/Gaze	Vacant stare; will not focus on face or on an object	Eyes will fix on & follow your face or on a moving object
Speech/Cry	Weak, muffled or hoarse voice or cry	Strong voice or cry

Breathing			
Assessment	**Critical / Unstable**	**Potentially Unstable**	**Stable**
Airway	Complete or partially obstructed OR significant blood or secretions	Patient with minimal secretions	Patent
Work of breathing	Absent or labored with periods of weakness	Normal	Normal
Respiratory rate	Apnea, bradypnea, tachypnea, irregular	Occasionally increased	Normal
Breath sounds	Absent or decreased Grunting, wheezing, stridor	Normal or slight wheezing	Normal
Central skin color	Pallid, mottled, cyanotic	Pink	Pink
Inspection	Suprasternal, supraclavicular or intercostal retractions	Suprasternal, supraclavicular or intercostal retractions	Normal
Muscle tone/ body position	Hypotonia or atony	Normal tone, but may assume tripod position	Normal
Mental status	Extreme agitation or reduced responsiveness	Alert, agitated or combative	Normal
Pulse oximetry	Less than 85%	85% or higher	95% or higher

Circulation			
Assessment	**Critical / Unstable**	**Potentially unstable**	**Stable**
Heart rate	Tachycardia or bradycardia	Normal	Normal
Pulse strength	Weak central pulse, absent or weak peripheral pulse	Normal	Normal
Capillary refill	>3 to 5 seconds	<2-3 seconds	<2-3 seconds
BP	Hypotensive	Normal	Normal
Skin	Pallid, mottled, or cyanotic; cool	Normal	Normal

I. Managing Painful Procedures in Children

Managing painful procedures in children is one of the more difficult tasks a healthcare provider faces. No one wants to cause a child pain, but an acutely ill or injured child will require medications, blood draws, x-rays, IVs or other uncomfortable and frightening interventions. This is especially difficult for healthcare providers who do not usually care for children.

However, there are several techniques and advances in the care of children that can help minimize the trauma felt by both the patient and their family and many times can actually increase the likelihood the procedure will be successful.

Tip #1: Know how to quantify pain in children

Quantifying pain is difficult for adults and especially problematic in children. Changes in vital signs (heart rate, breathing rate, and blood pressure), facial expression and behavior are most widely used to rate pain in children. There are different pain rating scales used for infants and children and must consider the child's age and ability to communicate and quantify. As with any pain skill, the initial score is not as important as the change in score. Reassessment and reevaluation of pediatric pain is essential in monitoring the effects of care provided. See Figure 1-6 for an example.

Figure 1-6: Faces Pain Rating Scale

Consists of six cartoon faces ranging from a smiling face for "no pain" to a tearful face for "worst pain."

Recommended Age: Children as young as 3 years.

Tip #2: Understand your patient's development stage, use words they will understand

First and foremost, clinicians need to understand a child's developmental stage both physically and emotionally in order to address their needs and concerns. There are ways to communicate with a toddler that are much different than communicating to a pre-teen or teenager. Medical terminology can be confusing to adults and thus incomprehensible or easily misunderstood in a child. For example:

What we say	What they hear	Try saying...
IV	Ivy?	Small straw to help give you medicine
Give you a shot	Are you mad? Why do you want to hurt me?	Give you some medicine using a small needle.
Stretcher	Stretch her...why?	Bed with wheels
Blood Pressure	Will there be blood?	Show them the cuff and how its "hugs" them
Flush your IV	Down the toilet?	Explain how liquid helps keep the IV clear.

Tip #3: Maximize Non-Pharmaceutical Techniques

There are numerous non-pharmaceutical techniques that should be employed to ensure a successful procedure and limit the potential trauma to patient and families. For the toddler and school age child, never separating the child from the parent often provides the feeling of safety that is important for the child. Holding a child securely also better guarantees that a procedure such as an IV, blood draw or suturing is successful and completed as quickly as possible.

There are many "comfort hold" techniques taught by Child Life Specialists demonstrated below which provide a secure hold and keep the parent and child together. This assumes that the parent is willing to be an active participant. Explaining to the parent how their anxiety can translate to their child and informing them of the active role they play in determining the success of the procedure oftentimes leads to better communication and cooperation.

Below are recommended "comfort hold techniques" for various types of procedures:

Figure 1-7: Medication administration (oral or intranasal)

Figure 1-8: IV or blood draw comfort hold

Figure 1-9: Peroneal examination

Tip #4: Keep children distracted

Children (and their parents) are automatically focused on the procedure. However, many times this merely increases the anxiety and lack of cooperation. Use books, cell phones, video games, sing favorite songs, to keep the child distracted and calm. When choosing a distraction technique, larger format devices or books are preferred. They provide a larger visual stimulus, but they also provide a barrier between the procedure and the patient (see below).

Figure 1-10: Using distraction techniques during procedures

Tip #5: Medications

Topical Anesthetics

A. LET (Lidocaine – Epinephrine – Tetracaine): This is the most common topical anesthetic used in emergency departments for topical anesthesia and can be used for partial and full thickness wounds. Important points when using LET:

   i. Encourage your pharmacy to use the gel formulations of LET (recipe in Attachment 1-E). The gel carrier agent allows the active ingredients to maintain contact more closely to the wound thus allowing better absorption and anesthesia

   ii. Always apply LET to a cotton ball (not gauze) and apply firmly to the wound and secure firmly preferably with a pressure dressing such as coband instead of just tape, to increase absorption and thus effectiveness.

B. LMX and EMLA: are also topical anesthetics but used on intact skin. Because they are applied to intact skin, they often take longer to be effective. The possible uses of LMX and EMLA in emergency procedures in children include procedures such as accessing port-a-caths; digital blocks and replacing g-tubes.

Needle Free Injection Devices

A. J-tip: (National Medical Products, Inc):

   i. Comes in 2 doses: .25 and .5cc 1% Lidocaine without epinephrine

   ii. The contents are delivered under high pressure generated by a compressed CO2 cartridge which forces the medication 5-8mm beneath the skin.

   iii. Activating the J-tip causes a loud pop which is startling, and children need to be prepared for this event.

   iv. The J-tip's primary use is for IV insertion and needlesticks: please see instruction video for use: https://jtip.com/how-to-use-j-tip-and-reduce-needlestick-injuries/

   v. J-tip has been shown to be effective and safe[9]

Figure 1-11: J-tip: https://jtip.com/

Intranasal Medication

A. Fentanyl and Versed

i. Intranasal Fentanyl dose: 1.5 mcg/kg/dose
ii. Intranasal Versed dose: .2-.4mg/kg/dose
iii. Volume of dose is the limiting factor, not mg dose. Only 1cc can be instilled in each nares to be effective.
iv. The medications need to be delivered through an intranasal atomizer (See Figure 1-5)
v. For an example of Intranasal policy please see Attachment 1-F

Figure 1-12: Use of atomizer for intranasal medication

Tip #6: Listen to your patients

Historically, we have not thought children "capable" of understanding or participating in their care. Certainly, their adult caregivers must participate and may have ultimate decision-making authority, however this does not mean the pediatric patient should not be heard. Pediatric patients deserve respectful treatment. They have needs and preferences that are valid. Below is a list written by a 7-year-old after spending 2.5 months in the hospital fighting a rare form of juvenile arthritis:

1. Don't surprise me
2. Always think of a less painful way of doing things
3. Be honest
4. Ask permission before you put any part of your body on mine
5. Get down on my level
6. Try to keep the doctors and nurses who come into my room the same.
7. Try not to wake me up so many times
8. Dress normal
9. Get cable
10. Stop saying "it's no big deal"

Section 2: Outpatient Preparedness Recommendations

Introduction

In general, healthcare disaster planning focuses primarily on acute care and in-patient facilities. These institutions have many of the critically ill and complex patients whose care could be immediately compromised during a disaster. In addition, these types of facilities will be recipients of acutely ill or injured patients and must plan to surge and provide life- and limb-saving care.

Outpatient providers have trusted and long-term relationships with their patients who will look to them for care, expertise and information.

However, this in no way negates the incredible importance and need for our outpatient partners to plan and prepare as well. Outpatient clinics and primary care are the backbone of our healthcare system. Those who work in the outpatient setting have trusted and long-term relationships with their patients who will look to them in times of disaster, not only for care, but for expertise and information.

Primary care can be a source of disease surveillance and situational awareness during public health emergencies such as a novel infectious disease and, therefore, must maintain good communication with public health and healthcare coalitions. During medical surge they can relieve the strain on acute care facilities by providing triage as well as follow-up care for those who may need to be discharged from acute care settings early, in order to provide in-patient surge resources. And in times when medical countermeasures need to be deployed, whether it be a treatment or a vaccine, clinics will play a major role in distribution.

It has been shown repeatedly that a resilient community is one that is prepared. If our patients are prepared, especially those with chronic medical problems, special needs, or who depend on durable medical equipment, then it is less likely they will end up in an acute care setting with a potentially preventable problem (e.g. a dialysis patient who has no back-up transportation plan.)

Medically complex patients must have a disaster plan…and a back-up to that plan.

Primary care providers are key in making sure their patients have a plan, and a back-up to that plan, especially those at high risk for complications or deterioration due to a disaster.

Below is a checklist of general recommendations and responsibilities for all outpatient clinics.

1. Develop, maintain and exercise Continuity of Operations Plans (COOP)

- Practices who are in partnership with other hospitals or healthcare systems should communicate with administration to understand what resources are available for both planning and operations (e.g. emergency procedures, temporary off-site vaccine storage, communication protocols).
- Those practices which are not in partnership with other healthcare systems may consider reaching out to similar private practices to develop cooperative plans, share resources, increase purchasing power of emergency equipment and supplies.
- Develop and exercise COOP plans prior to disasters. After a response of any size (e.g. short power outage vs overwhelming earthquake) prepare and learn from After Action Reports (AAR). (See Attachment 2-A for AAR templates)
- Have a process in place to review and improve on lessons learned.

- Plan and conduct exercises for power failure of vaccine storage units, including vaccine transport and storage in back-up location.
- Develop and test the practice's ability to communicate proactively with patients (via text, website, social media, on-call phone message, and other methods as feasible), especially those with chronic or complex medical problems.
- Develop and test the practice's ability to access patient records off-site.
- Develop and test the practice's back-up of patient records.
- Develop and test the practice's ability to contact staff.
- Checklists may be helpful for both planning and response (See Attachment 2-B)
  - Preparedness Checklists for Pediatric Practices

2. Develop, maintain and exercise outpatient medical surge plan

- Develop plans to expand services. Consider extending hours of operation and increasing response to the event. Utilize phone triage or telehealth for appropriate indications (e.g. rapid medical evaluation or counseling).
- Consider cancelling, rescheduling, or limiting routine well child or annual healthcare visits and other non-urgent appointments to accommodate an influx of disaster-related visits.
- Communicate and coordinate with public health or healthcare coalitions to understand what services are needed and to provide situational awareness.
- Prepare staff with up-to-date information that can be shared with families.
- Understand the clinic supply chain including 24/7 emergency contacts for regular suppliers. In the event of supply chain disruption, know procedures by which to procure emergency supplies through your local health jurisdiction, city or county emergency operations center or state supply.
- Identify potential alternate spaces to expand care including potential neighboring buildings and/or parking lots. Consider drive up options for testing, screening and distribution of medical countermeasures. Store necessary emergency supplies needed to utilize these alternate spaces (e.g. clipboards, signage, traffic cones, etc.)
- Determine a plan to increase or supplement staffing, accounting for potential staff illness or injury. During a declared emergency know how to utilize the local Medical Reserve Corps (MRC) or state Health Volunteer Act (HVA) plans through the Uniform Emergency Volunteer Health Practitioners Act

3. Maintain good communication with Public Health and Healthcare Coalitions to improve planning and response coordination

- Community clinics should know the processes by which to communicate with local and state public health departments and healthcare coalitions
- Ensure registration to receive Health Alerts and other urgent communications. (To receive notifications from NWHRN please email: info@nwhrn.org)
- Have access to 24/7 telephone numbers, Duty Officer lines, and websites to either request assistance or report events or situational awareness.

4. Develop and maintain the ability to proactively communicate with patients during a disaster

Practices should prepare to provide information to patients in multiple ways during public health emergencies and disasters:

- Provide information on practice websites.
- Provide fact sheets, posters, and pamphlets in waiting areas.
- Record disaster-related information on telephone answering systems and voice mail (e.g., Disease information, when to call the physician, when to go to the Emergency Department).
- Provide frequently asked questions (FAQs) and talking points to designated staff who answer phones.
- Utilize a variety of techniques for communication with patients, taking advantage of electronic medical records, text messaging and use of social media, keeping in mind that many vulnerable populations may not have access to certain technologies.

5. Assist families in planning for patients with special healthcare needs

- Clinicians should identify patients with specific diagnoses or medically complex conditions for the purpose of tailored communication with or outreach to those families (an example of meaningful use of EMR technology). Consider periodically testing the system to ensure the practice can transmit messages including from offsite and that patients and families can receive the information.
- Clinicians can use template plans to encourage families with special needs children to have preparedness plans in place prior to disasters and to provide referrals for special services that might be available to them. (See Attachment 2-C)
- Clinicians should help patients and families to develop and use coordinated care plans that can be shared with hospital-based clinicians as well as schools and childcare programs.

6. Improve integration of schools and childcare programs into local disaster planning

- Healthcare professionals who work for schools (e.g., school medical directors and school nurses) should be engaged in disaster planning. They should be integrated into emergency planning activities long before actual disasters happen, so that they understand their roles in an emergency and have the opportunity to form relationships with local, regional, and state public health authorities.
- School nurses and physicians should participate in public health surveillance activities and, when necessary, disease control interventions, particularly those involving schools. This engagement should be in place prior to emergencies and disasters.
- School personnel should be aware of mental health concerns following a disaster for monitoring and intervention. See Section 7: Psychosocial Needs of Children During a Disaster
- School health professionals (including school medical directors and nurses) should participate in pre-disaster training activities and be prepared to participate in “just-in-time” educational programs during disasters.
- Clinics in close proximity to schools and daycare facilities can develop professional relationships with local childcare and school directors and be available for consultation during a disaster.

Plan for Recovery Phase

Recovery from a major disaster can in reality be much longer and more complicated than the event itself. Clinics should be prepared to care for long-term consequences of a disaster. Patients may have new illnesses and injuries that require prolonged treatment, follow-up and specialty care coordination. Those with chronic medical conditions may develop exacerbations of disease due to the situation (i.e., COPD flares due to smoke and dust, difficult control of diabetes due to food supply chain issues or lost or destroyed medications). Patients and families may have suffered loss: loss of a loved one, loss of a job or loss of those physical items that provide stability and security. The post-disaster literature shows that mental and behavioral health consequences of disaster can persist and primary care clinics become an important source of support and healing.

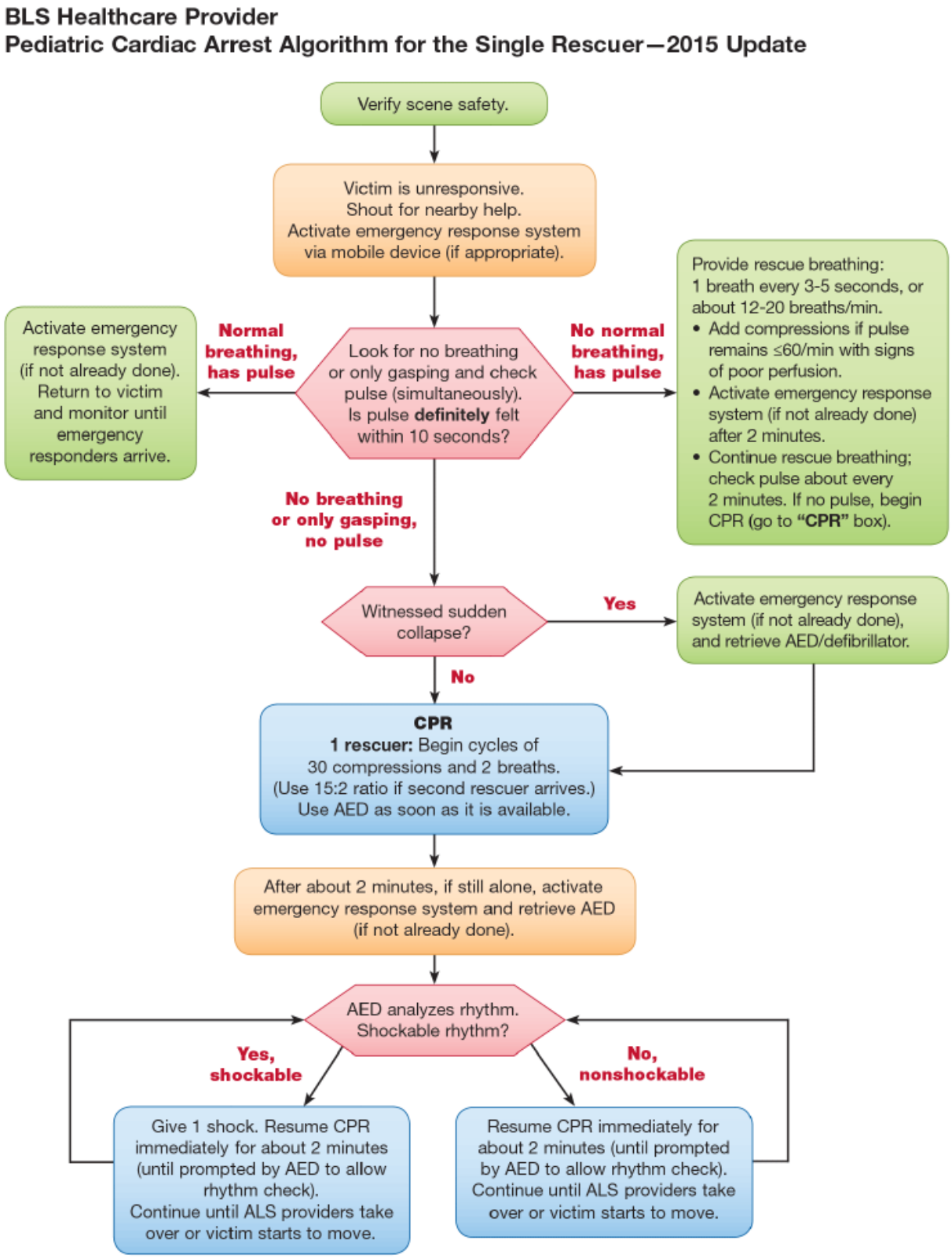
Clinics should be prepared to care for long-term consequences of a disaster.

Therefore, outpatient clinics need to plan for this recovery phase. Staffing needs may continue to be high and the medical surge, although may taper after the acute event, will continue. Clinics must be attuned to the needs and stress of their own staff and providers as well and provide them with the necessary guidance and assistance as needed.

Specific Recommendations for Non-Pediatric Clinics to prepare for Pediatric Patients

- All clinics should know the basics of pediatric assessment. (See Figures 1-4, 1-5)
- All clinics should know how to support the basic ABC's of pediatric resuscitation until help arrives. It is recommended that all clinics keep child size ambu bags and pediatric CPR reference available in emergency supplies. (See Attachment 2-D)
- All clinics should know how to obtain emergent pediatric assistance and consultation including EMS and transfer centers at closest pediatric specialty centers.
- All clinics should know the process and procedures for caring for pediatric security and documenting unaccompanied minors. (See Sections 3 and 4)
- Recommend keeping all the above supplies and reference together in a designated and labeled Pediatric Emergency Supply plastic bin or bag and keep stored with all other emergency equipment.

Figure 2-1: Pediatric CPR Algorithm



Specific Recommendations for Pediatric Clinics

General

Pediatric clinics should follow all the above recommendations and, in particular, ensure that your patients and families have the information they need to prepare for disasters. This should include a family disaster kit and reunification plan in case an event occurs while their children are in school or daycare. *(See Attachment 2-E)* They need to keep vital documentation on hand, especially for special needs children or children with complex medical problems. *(See Attachment 2-D)* Medication lists, allergies, past medical history, procedures, names of specialists and contact information will assist in times of disaster.

Keep in mind that your patients may not be seen at a pediatric specialty clinic or pediatric specialty hospital in times of response. Most likely they will be cared for by predominantly adult providers. Infrastructure such as transportation, phone lines and electronic medical records may be inaccessible. Basic information is needed to properly provide emergent care to your patients. Families must have documentation on hand both written and electronic

Continuity of operations plan: vaccines

Pediatric offices, more than other primary care offices, have substantial investment and responsibility to maintain vaccine supply. Your patients will need these medications during and post-event. The loss of vaccines due to inappropriate storage, back-up procedures or transfer procedures will be a loss not only to your clinic, but also to the community you serve.

Pediatric offices, more than other primary care offices, have substantial investment and responsibility to maintain vaccine supply.

Below are several resources to help you plan for vaccine storage, movement and maintenance in times of response. Hard copies can be found in Attachment 2-F:

- AAP Immunization Resources Storage and Handling Series Disaster Planning
- CDC Vaccine Storage and Handling Toolkit
- Packing Vaccines for Transport during Emergencies

Section 3: Pediatric Security Issues

General

Patient safety and security is an everyday practice for clinical facilities. However, in an acute or prolonged emergency, safety and security issues may become not only more urgent but also more difficult to maintain given potential regional and hospital infrastructure damage or general medical patient surge.

The ability to identify, track, care for and reunite children with their families is an important part of the pediatric planning process

Pediatric security issues have an extra layer of complexity and responsibility. In general, in-patient pediatric security has focused primarily on the potential for infant abduction from the nursery or labor and delivery. However, there are other security and safety needs when taking care of children in both in-patient and out-patient settings.

Children may be non-verbal and arrive unaccompanied. They may be patients and arrive with family members who are also ill or injured and need to be tracked together. They may be uninjured but need to be cared for while their injured or ill family member is receiving care.

In all these situations and potentially others, the ability to identify, track, care for and reunite children with their families is an important part of the pediatric planning process. The following are basic recommendations to assist with planning.

- Develop and maintain a protocol to rapidly identify and protect unaccompanied children as well as a Pediatric Tracking System so as to always identify the location of any pediatric patient both accompanied and unaccompanied.
- Develop a Pediatric Safe Area where uninjured or released children can safely wait for adult caregivers.
- In facilities that primarily do not care for children, practice this procedure in drills and exercises. It is recommended that all items in this section be kept in both an on-line and hard copy format.

Pediatric Safe Area

Create Pediatric Safe Areas that will serve as a holding area for uninjured, displaced or released children awaiting adult caregivers. A Pediatric Safe Area Checklist has been provided to assist in the establishment of such areas. *(See Attachment 3-A)*

Identify a Pediatric Safe Area (PSA) Coordinator who will assume the responsibility of setting up and supervising the pediatric safe area. Consider using non-medical personnel such as social work, child life or a qualified volunteer. Carefully consider how these individuals will be credentialed and screened prior to an event to ensure the safety of the children under their care. Included is a Sample Job Action Sheet which outlines the PSA Coordinator position. *(See Attachment 3-B)*

Create and use a Pediatric Safe Area Registration Sheet to document activity, such as transfer status, location, and final disposition, regarding the child. *See Attachment 3-C for an example.*

Ensure that hospital security is aware of the issues and planning around pediatric safety and security.

Recommended Protocol for Unaccompanied Children or Child With Lone Adult Patient

- All children (<18 yr.) entering the healthcare facility must be accompanied by a responsible adult.
- If an unaccompanied child is identified they should be immediately taken to a Triage area to be assessed for possible medical issues and a "Child Identification Survey" should be completed (See Attachment 3-D).
- All unaccompanied children should be issued an identification bracelet or badge, a photo should be taken if possible, and if medically cleared, the child should be taken to the Pediatric Safe Area until a safe disposition or reunification can be made. If a child requires medical treatment, they should not be left unattended.

The names and/or photos of all unaccompanied children should be reported immediately to the facilities emergency operations center.

- The names and/or photos of all unaccompanied children should be reported immediately to the facilities emergency operations center. Additional reporting should be made to local law enforcement and the National Center for Missing and Exploited Children. Identify prior to an event who is responsible in your facility to file these reports.
- If the child arrives with an adult who is a patient, place identical identification bands on both the child and the adult with the following information that includes both the name and date of birth of the child and the name and date of birth of the responsible adult.

Section 4: Infection Control in a Communicable Disease Emergency

Point of Entry Measures

- Place respiratory etiquette signs prominently in entry and waiting areas
- Instruct all staff regarding disease symptoms, mode of transmission and exposure risk factors (e.g. travel history) and educate regarding exposure control measures as advised by Public Health
- Screen to identify symptomatic or high-risk patients at point of entry to implement exposure control measures
- Instruct and supervise patients and caregivers in exposure control measures (such as respiratory etiquette & hand hygiene)
- Provide adequate supplies of exposure control supplies if available (i.e. tissues, hand gel, emesis basins etc.) and an easy way of disposing used materials. If respiratory precautions are indicated, Mask symptomatic adults and, when feasible, symptomatic children (usually ≥ age 2)
- Separate persons with symptoms from those without (exception: adult caregivers who may need to remain with ill children for care and/or comfort or ill adult caregivers who may need to remain with asymptomatic children)
- Separate contacts of ill people from those who have not been exposed
    - Ideal separation management: symptomatic individual in single room
    - Minimal management: symptomatic individuals, masked and separated with appropriate social distancing.
- When masking is not possible, emphasize the importance of respiratory etiquette and hand hygiene.
- Cohort symptomatic individuals (masked and unmasked) in an area which has a door that can be closed, and which is large enough to permit social distancing
- Ideally include symptomatic unmasked children after diagnosis is confirmed. If confirmation is not possible, make decisions according to symptoms and epidemiology
- Conduct contact identification procedures among persons accompanying an ill individual
- Instruct, observe and supervise to ensure appropriate infection and exposure control measures are being followed by cases, contacts, personnel and caregivers

Management of Asymptomatic Exposed Children and Adults

- Issue hospital identification bands to all children; include parent/caregiver information and contact status
- Cohort asymptomatic children and asymptomatic caregivers who have experienced the same exposure
- Keep group size as small as is practical and promote appropriate social distancing
- Create a log to list all persons, including staff, who enter the cohort setting
- Include date, name and brief ID info, time in/time out, information about further exposures within the cohort, including date, time, duration of exposure and name of person with symptoms

- Promote frequent and thorough hand washing with soap and water or use of alcohol-based hand sanitizer
- Discourage sharing of toys unless washed and disinfected first
- Establish routine for cleaning environmental surfaces, including transport equipment

Additional Infection Control Measures for Unexposed Neonates

- Whenever possible, keep healthy mothers and their infants together. Cohort mothers and children together as a single unit. Behavioral, emotional and mental discomfort/disorders in the mother may be exacerbated by the emergency environment.
- When they cannot be kept together, ensure that there is good communication with the family, so that they are aware of where the patients are and what type of care they are receiving.
- Remember in selecting the location for cohorting that newborns require a dry, clean, warm environment to promote thermoregulation and minimize stress. A quiet environment would be best for promoting mother-infant bonding.
- Alternative sites for care of newborns and their mothers may need to be arranged in order to keep the neonate and new mother out of close proximity to infectious patients.

Section 5: Emergent Neonatal Care and Resuscitation

A pregnant woman in active labor can present to any hospital during a disaster and transfer to a specialized hospital may not be feasible. Every hospital should have a plan to care for the actively delivering woman, including newborn care and neonatal resuscitation. For the non-OB/nursery hospital this plan should include emergency supplies listed below, as well as 24/7 contact information to obtain immediate assistance. **This contact information should extend beyond 911 and EMS, as EMS may be unavailable during a large, overwhelming event.**

The Neonatal Resuscitation Program (NRP) as part of the American Academy of Pediatrics (AAP) offers multiple resources for wall charts, checklists and videos. As mentioned above in the "Pediatric Training Recommendations" section, official NRP trainings are highly recommended for staff that may be responsible for newborn care. Although the basics are provided here, this is meant to be a quick refresher and does not take the place of the full course.

A. Urgent Maternal History

The first step in caring for a woman in active labor, who presents to a hospital that does not typically handle obstetric patients, is to determine key historical information. Even if assistance can only occur via telephone or telehealth, these important historical points will help guide successful maternal and newborn care.

Note: This is not a complete obstetric history. Rather, this is an abbreviated "urgent maternal history" to help make triage decisions.

Determine how pregnant laboring women will be triaged and cared for.

- How far along are you in this pregnancy?
- What is your due date?
- If this is not your first baby, did you have any complications with your previous delivery?
- Has your water broken?
- If the water has broken, what color was it?
- How many babies are you carrying?
- What drugs/medications are you currently taking?
- Are you allergic to any medications?
- Have you used any narcotic drugs recently?
- Do you know your blood type?
- Have there been any complications during your pregnancy such as high blood pressure, swelling of the feet, severe headaches, diabetes or bleeding?

B. Supplies

The following supplies will help your in-patient facility prepare for an unexpected delivery. Keep these supplies grouped together in a plastic bin that can be easily accessed during an emergency.

Neonatal resuscitation must be available and ready to be implemented at every delivery. Resuscitation equipment should be prepared and checked prior to delivery of the infant.

Basic supplies for childbirth:

- 3 curved Kelly clamps
- 2 Mayo scissors
- 1 sponge stick
- 1 needle holder
- 1 large basin or 1 large kidney basin (for placenta)
- 1 10-pack sterile gauze sponges
- 1 Hollister cord clamp (If no cord clamp, may use sterile gauze to tie off cord)
- Suction catheters
- 1 bulb syringe
- 4 sterile towels
- IV 18 (for mother)
- IV 24g (for newborn)

For perineal laceration repair:

- 1 1.5-inch 20-gauge needle (for lidocaine administration)
- 1 10-cc syringe
- 1% lidocaine
- Chromic “000” or Vicryl “000”
- Betadine solution

Medication for Mother:

- 2 10-unit vials Pitocin
- Rhogam [Rho(D) Immune Globulin (Human)], if necessary

Supplies for Infant:

- Neonatal Resuscitation Program algorithm (wall or flip chart)
- Heat source (warmer bed, gel warming pad/multiple gel hand warmers, warm blankets)
- Blankets/towels for drying
- Neonatal self-inflating Ambu bag newborn and preterm facemask
- LMA (size 1 or 1.5)
- Small nasal cannula
- Bulb syringe and/or deep suction catheter 5, 8 or 10F with wall suction
- Hat
- Plastic wrap – food grade – for wrapping low birth weight infants
- ETT uncuffed 2.5 (very preterm), 3 (preterm), 3.5 (term)

- Miller Laryngoscope blade with handle and functioning light source (0 blade for <30 weeks, 1 blade for >30 weeks)
- Consider equipment for Umbilical lines: umbilical line 5F, umbilical tie, 3-way stopcock, syringes with sterile saline, scalpel, 2 clamps, small angled tweezers, and suture kit
- PIV supplies (23-gauge angiocath)
- Back up IV access equipment: small intra-osseous
- Access to: Epinephrine 1:10,000, 1mL syringes, flushes
- Ongoing care
- D10 water for ongoing fluids
- Erythromycin 1% eye ointment
- Phytonadione 1.2cc for injection (vitamin K)
- Pneumothorax kit (place all items together in separate bag)
- Alcohol wipe
- Butterfly needle 23 or 25guage
- 3-way stopcock
- Large syringe (30 or 60mL)
- Small tegaderm

Supplies must not only be on hand but prepared prior to delivery. The following Table lists key steps that should be completed PRIOR to delivery.

Table 5-1: NRP Checklist

1. Warm

- ☐ Preheated warmer
- ☐ Warm towels or blankets
- ☐ Temperature sensor and sensor cover for prolonged resuscitation
- ☐ Hat
- ☐ Plastic bag or plastic wrap (<32 weeks' gestation)
- ☐ Thermal mattress (>32 weeks' gestation)

2. Clear airway

- ☐ Bulb syringe
- ☐ 10F or 12F suction catheter attached to wall suction, set at 80-100 mm Hg

3. Auscultate

- ☐ Stethoscope

4. Ventilate

- ☐ Flowmeter set to 10L/min
- ☐ Oxygen blender set to 21% (21%-30% if less than 35 weeks' gestation)
- ☐ Positive-pressure ventilation (PPV) device
- ☐ Term- and preterm-sized masks
- ☐ 8F feeding tube and large syringe

5. Oxygenate

- ☐ Equipment to give free-flow oxygen
- ☐ Pulse oximeter with sensor and cover
- ☐ Target oxygen saturation table

6. Intubate

- ☐ Laryngoscope with size-0 and size-1 straight Target oxygen saturation table

7. Medicate

Access to:

- ☐ 1:10,000 (0.1 mg/mL) epinephrine
- ☐ Normal saline
- ☐ Supplies for placing emergency umbilical venous catheter and administering medications
- ☐ Electronic cardiac (ECG) monitor leads and ECG monitor

C. Infant resuscitation key points[10]

A warm baby is a stable baby.

Having someone on your pediatric team who is familiar with neonatal resuscitation is ideal. However, this is not always possible. Therefore, having the basic skills and prompts to aid in resuscitation are extremely important.

While obtaining outside assistance via your neonatal emergency contacts, the following recommendations should be followed:

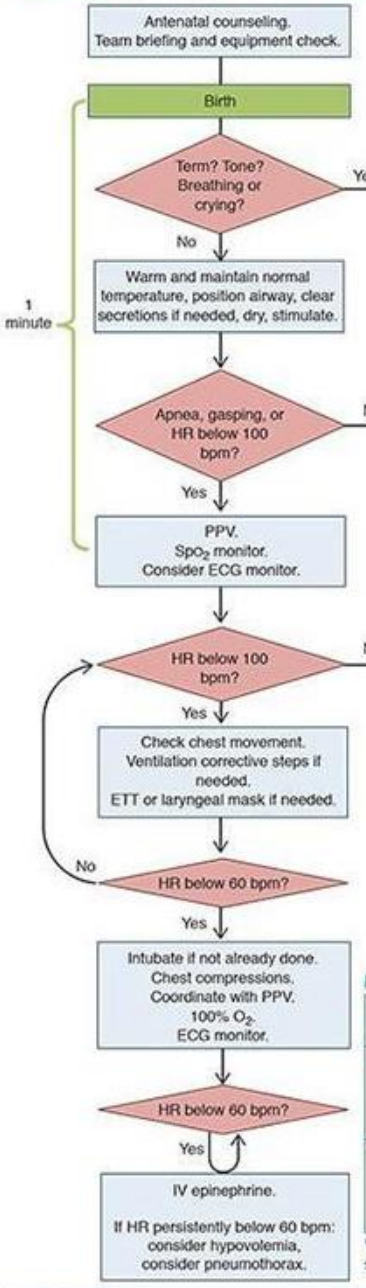
- A warm baby is a stable baby.
- Use an external heat source, warm blankets, and a hat.
- For small babies <1.5kg wrap body and scalp in plastic.
- After resuscitation, place well-babies' skin to skin with mother and cover them both with blankets.
- Monitor temperature frequently.
- Avoid undressing and unwrapping, unless absolutely necessary.
- If a newborn is not breathing, struggling to breathe, desaturated, or bradycardic, assume their lungs are not adequately opened.
- Provide positive pressure breaths to open them, not just blow by oxygen.
- Always complete the steps in the respiratory section of the NRP algorithm before providing chest compressions. Heart rate cannot improve unless the lungs are opened.

Below are resuscitation reference algorithms. Printable versions are available as *Attachments 5-A, 5-B*.

Figure 5-1: NRP Neonatal Resuscitation Reference Chart

Neonatal Resuscitation Program® - Reference Chart

The most important and effective action in neonatal resuscitation is ventilation of the baby's lungs.



Airway
- Put baby's head in "sniffing" position
- Suction mouth, then nose
- Suction trachea if meconium-stained and NOT vigorous

B Breathing
- PPV for apnea, gasping, or pulse <100 bpm
- Ventilate at rate of 40 to 60 breaths/minute
- Listen for rising heart rate, audible breath sounds
- Look for slight chest movement with each breath
- Use CO_2 detector after intubation
- Attach a pulse oximeter

C Circulation
- Start compressions if HR is <60 after 30 seconds of effective PPV
- Give (3 compressions: 1 breath) every 2 seconds
- Compress one-third of the anterior-posterior diameter of the chest

D Drugs
- Give epinephrine if HR is <60 after 45 to 60 seconds of compressions and ventilation
- Caution: epinephrine dosage is different for ET and IV routes

Corrective Steps

M	Mask adjustment.
R	Reposition airway.
S	Suction mouth and nose.
O	Open mouth.
P	Pressure increase.
A	Airway alternative.

Pre-ductal Spo_2 Target

1 min	60%–65%
2 min	65%–70%
3 min	70%–75%
4 min	75%–80%
5 min	80%–85%
10 min	85%–95%

Endotracheal Intubation

Gestational Age (weeks)	Weight (kg)	ET Tube Size (ID, mm)	Depth of Insertion* (cm from upper lip)
<28	<1.0	2.5	6-7
28-34	1.0-2.0	3.0	7-8
34-38	2.0-3.0	3.5	8-9
>38	>3.0	3.5-4.0	9-10

*Depth of Insertion (cm) = 6 + weight (in kg)

Medications Used During or Following Resuscitation of the Newborn

Medication	Dosage/Route*	Concentration	Wt (kg)	Total IV Volume (mL)	Precautions
Epinephrine	IV (UVC preferred route) 0.1 to 0.3 mL/kg Higher IV doses not recommended Endotracheal 0.5 to 1 mL/kg	1:10,000	1 2 3 4	0.1-0.3 0.2-0.6 0.3-0.9 0.4-1.2	Give rapidly. Repeat every 3 to 5 minutes if HR <60 with chest compressions.
Volume expanders Isotonic crystalloid (normal saline) or blood	10 mL/kg IV		1 2 3 4	10 20 30 40	Indicated for shock. Give over 5 to 10 minutes. Reassess after each bolus.

*Note: Endotracheal dose may not result in effective plasma concentration of drug, so vascular access should be established as soon as possible. Drugs given endotracheally require higher dosing than when given IV.

Figure 5-2: Simplified NRP Algorithm

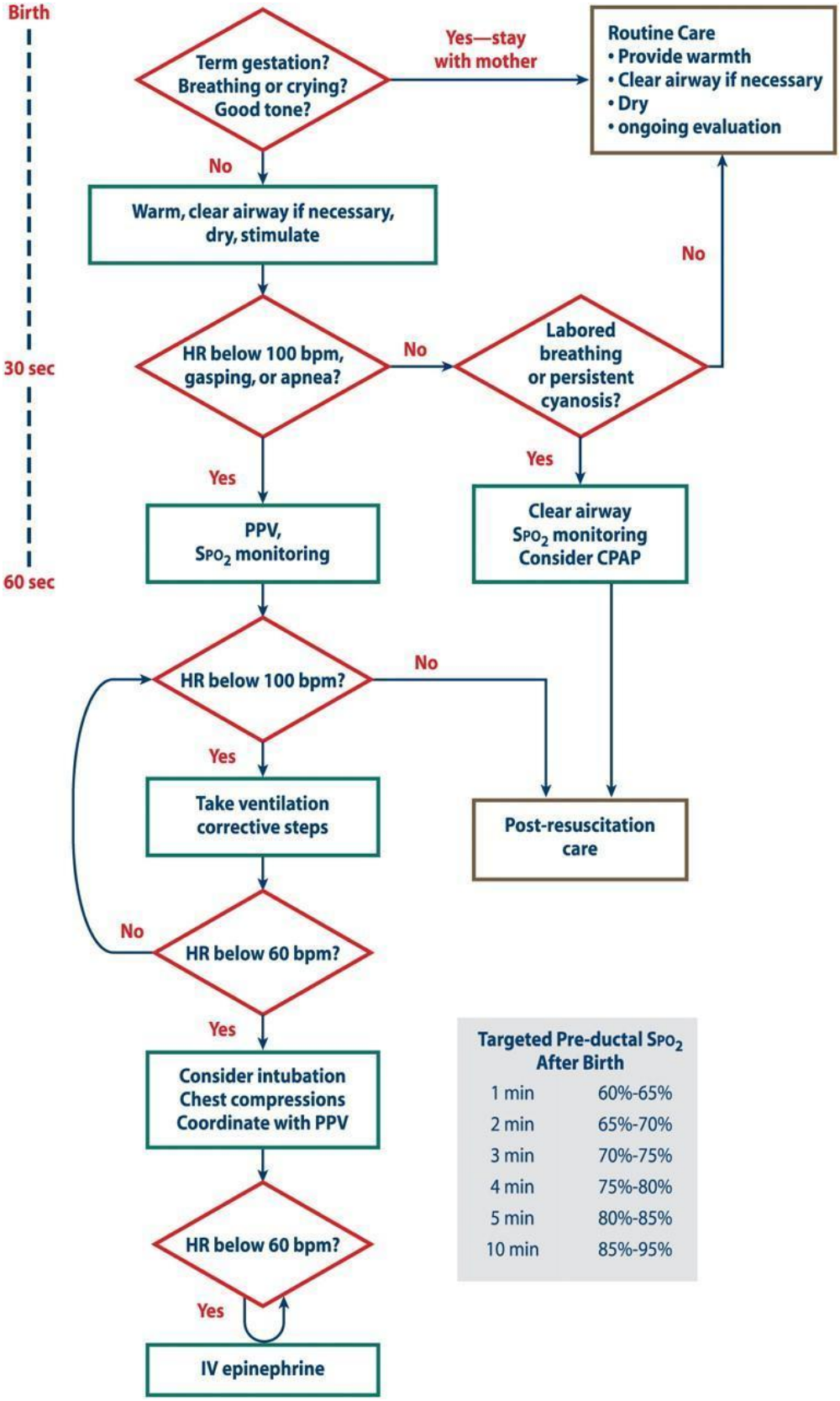


Photo guide to resuscitation

1. Vigorous term infants can be warmed, dried, and stimulated with linens on mother's chest:

2. Wrap small babies in plastic wrap to keep them warm, no need to dry first; use an external heat source whenever possible (heater, gel warmer):

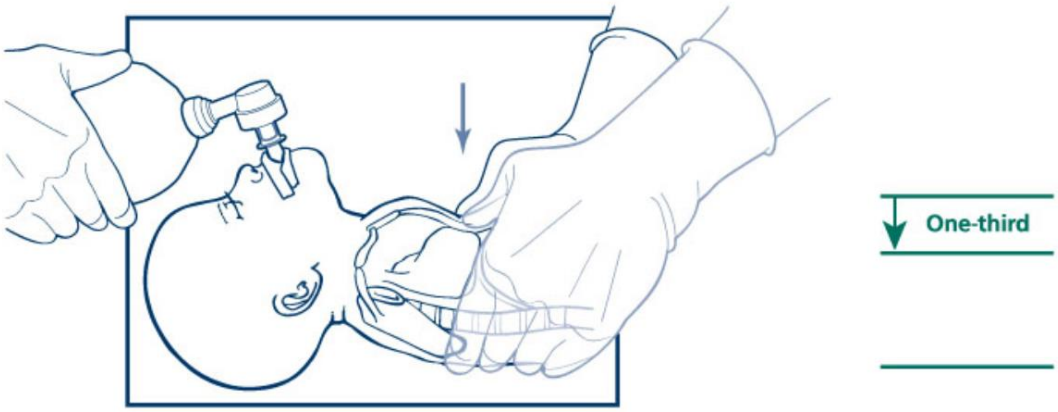
3. Dry bigger babies well and then replace wet linens with dry ones to prevent heat loss. This is normal newborn coloring. Note acrocyanosis which is normal up to 24-48 hours after birth:

4. Correct placing of the face mask to give PPV breaths:

5. Placing an LMA: insert it deflated until it feels seated then inflate the balloon:

6. Providing chest compressions after placement of airway and 30 seconds of good ventilation if heart rate remains below 60.

   Call out: “1 and 2 and 3 and breath” while compressing 1/3 the depth of the chest



D. The Umbilical Cord

The first priorities are to dry, warm, suction and position the baby. There is no rush to cut the cord. The cord does not need to be cut before warming and drying the baby is initiated. Keep the baby close to the mother so the cord is not pulled tight.

It is normal to feel the cord pulsating with the blood flow from the placenta to the baby. Before cutting, the cord should be tightly clamped or tied in 2 places and cut between the 2 clamps. There are no nerve endings in the cord, so it does not hurt either the baby or the mother when it is cut. Cover the baby again to keep the baby warm.

E. Breastfeeding

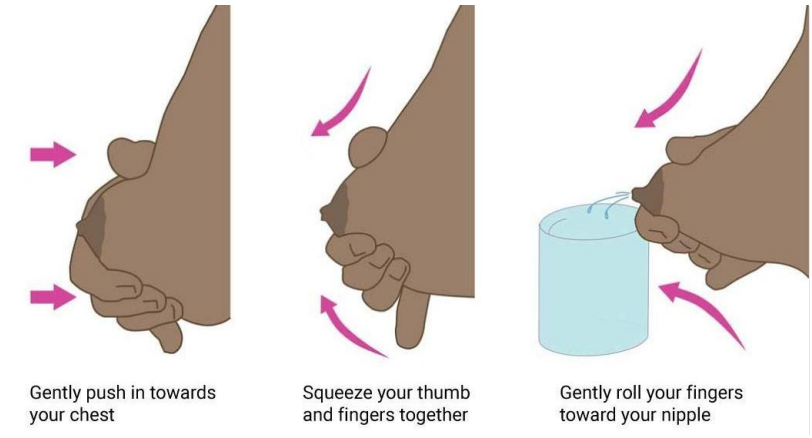
Getting started with breastfeeding

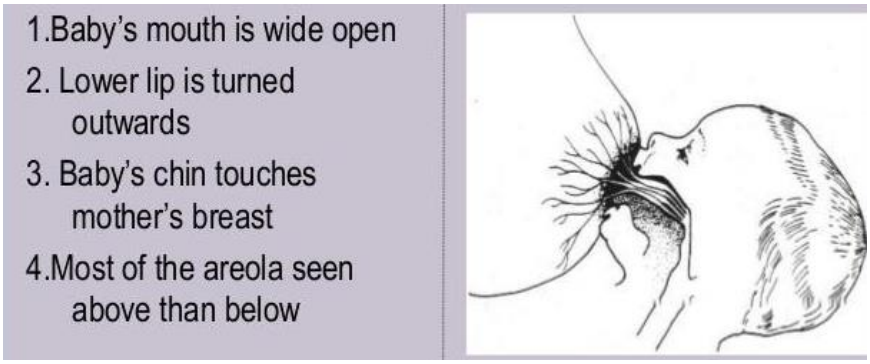
A newborn will nurse best in the first hour after birth when the baby is awake and alert. The mother and baby should be face-to-face and belly-to-belly. The baby will also nurse better if they are skin-to-skin.

The mother should place her nipple and breast against the baby's lips. When the baby opens their mouth wide, or an adult helps to open the baby's mouth wide by gently pushing down on the chin, the mother places her nipple deeply into the baby's wide-open mouth. It may take a few tries before the baby can start sucking. If the baby is sleepy, rub her belly and back firmly to wake her up. If the baby is too sleepy, try uncovering her for a short time and rubbing the mother's nipple against the baby's lips. If the mother gets tired, take short breaks and start again. Once the baby nurses for the first time it gets easier.

- It is important for the mother to breastfeed the baby in the first hour after birth and at least every 2-3 hours around the clock until her milk comes in.
- Colostrum, the liquid that is in the breast right after birth until the milk comes in, will give the baby all the food the baby needs, and it will help prevent infection.
- Breastfeeding will keep the uterus firm and decrease bleeding.
- Preterm or small babies may need extra help to get colostrum, encourage hand expression of colostrum and feed this to the baby with a spoon, small cup, syringe or finger until they are able to latch.
- Hand Expression Technique *(see Figure 5-3)*

Figure 5-3: Hand expression technique





Keep mother and baby together whenever possible

This helps establish breastfeeding, facilitates skin to skin care which keeps babies warmer than blankets alone, reduces the risk of low blood sugar for the baby, and ensures they are moved together if evacuation is necessary.

F. Safe Sleeping

Safe sleep ABCs

A safe sleep environment protects infants of all ages from suffocation and reduces the risk of sudden death.

- Alone: Babies need their own space to sleep to avoid accidental suffocation, no people, loose bedding, pillows, or stuffed animals should be in their sleep space
- Back: infants of all ages should be placed on their back for all sleep and naps
- Crib: a bassinet, crib, or container with sides (box) can be used for a safe sleep space, ensure the base is firm and flat with no loose bedding. In an emergency, a drawer or a bin may be used.
- A good swaddle, sleep sack, hat, and/or warm pajamas help keep babies warm (but not hot) when sleeping.

Figure 5-4: Safe sleeping

Section 6: Psychosocial Needs of Children During a Disaster

To properly care for children in any clinical setting, including hospitals, outpatient treatment clinics and alternative care facilities such as field clinics, it is necessary to consider both their physical and behavioral health needs and to treat them in the context of the family unit. Children's responses to disaster and hospitalization may share some aspects of adult responses but are distinguished by the developmental contexts in which children of varying ages experience, process, and communicate the impact of associated events and procedures. An unfamiliar environment such as a medical setting can be made to feel safer for pediatric visitors and patients by including familiar people, familiar things and routines. There may be cultural differences, or previous traumatization that may cause some children exposed to the same event to react differently. Any staff should be empathetic to each of these variances.

General Guidelines

To properly care for children, it is necessary to consider both their physical and behavioral health needs and to treat them in the context of the family unit.

- When describing a treatment experience to children of any age, it is important to be honest in your description and to use developmentally appropriate language and vocabulary in answering any questions they may have. It is important not to give preconceived notions about what a child may feel. For example, staff should avoid the use of the words 'pain' and 'scary' in describing experiences the child may have, since everyone feels pain and emotions differently. If the child asks about whether something will hurt, be honest. Examples they may be familiar with may be a way to explain e.g. "kind of like a pinch" "might feel like someone pushing on you."
- Since young children (preschool through school-aged) learn best by experience, provide as much information as you can to help the child learn about their upcoming experience. Describe what the child may smell, hear, touch and feel. For young children, using as many tangible items as possible, such as dolls and books, may be helpful in their understanding. Children often want to know "what comes next?" as a way to manage anxiety. Explaining prior to the experience about the sequence of events, and then reminding the child during the event may help to alleviate some of the worry. Children will sometimes use many questions as a way to delay a procedure or event about which they are afraid. Explanations are important. However, delaying the event via multiple questions may lead to even more anxiety for the child. Frightening or uncomfortable procedures should be completed quickly, once the initial information is provided.
- Children's reactions and symptoms can be expressed through behavior, thoughts, emotions, and physical reactions. Children's fears about their own safety can contribute to symptoms of anxiety and depression and may lead to oppositional and aggressive behavior. This may be an attempt to reassert some sense of control and should be recognized as such. Children who are exhibiting out-of-control behaviors need firm and gentle limits. Allowing them oppositional and aggressive behaviors without helping them to manage may lead to increased anxiety. In addition, an out of control child may create further anxiety and a concern about safety with other children who observe the behavior. Aggressive and destructive behaviors can be dealt with by removing the child from the area. Then, sitting with them until they are calm, and allowing them to talk about how they felt, before including them in planning for what comes next. For example, "We have to give you the shot to help you feel better, but you can choose which arm and squeeze my hand as hard as you want to".

- Don't leave children unaccompanied in front of a television, for example, with the news on, but allow them to talk about what is going on, if they choose. Clarify misconceptions with simple, truthful explanations.
- Refrain from having conversations about the disaster in front of the children or within hearing distance. This can lead to misunderstandings and misconceptions.
- Gather staff and develop language for describing events of the disaster. Ensure that all staff are educated accordingly and then communicate this information consistently to avoid adding to the children's confusion.

Opportunities for play are important for learning, expression of feelings, normalcy, escape and mastery.

- Opportunities for play are important for learning, expression of feelings, normalcy, escape and mastery. Age-appropriate toys and diversionary activities are helpful to have on hand. This may include puzzles, books, simple art supplies, videos/DVDs and audiotapes/CDs. If possible, allow children to interact in groups and monitor for misconceptions. Answer questions reassuringly but honestly. Take the child's age and development level into consideration. Use pacing, for example, "There was a big explosion and many people were badly hurt. What else would you like to know?"
- Try not to separate children from their primary caregivers for extended periods. Allow a parent/caregiver to accompany the child to procedures as much as possible. To encourage feelings of safety and familiarity try to limit the number of staff caregivers (i.e., assign the same nurse to care for specific children).
- Parents will be most helpful when they are/feel informed. If they are upset from not knowing what is going on, that tension is going to affect the child. Answer their questions honestly. It's ok to admit that you may not know the answer and offer to find out. Ask parents to let you know what methods they use to help their children with difficult situations and, if appropriate, use their knowledge to direct the intervention for the child.
- Assess for any common stress symptoms such as trouble sleeping, lack of appetite and physical complaints without an explainable medical basis. Assess for symptoms that may indicate a need for professional behavioral health consultation, such as overt depression and suicidal thoughts or behaviors, debilitating anxiety that interferes with activities of daily living, psychotic symptoms such as delusions, hallucinations or thought disturbances, or self-harming behaviors. A history of previous mental health disorders, such as depression, anxiety, Post Traumatic Stress Disorder, or Bipolar Disorder or other significant mood disorder would warrant at minimum an initial evaluation to determine the child's current level of functioning.
- Review with staff information about varying cultural responses to trauma and death.
- Children and teens need to be reassured that the staff at the hospital and professionals in the field are working to keep them safe, help protect everyone, assist those who are hurt, and looking for people who cannot be found (in general) and their family and friends (specifically).
- Give children and teens opportunities to tell their story and exercise acceptance and patience if they are unable to do so at the time. Provide a variety of methods to facilitate this: tape or video recorder, art materials or journals. On the other hand, restrict the amount of "storytelling" by others that the children or teens are exposed to in the initial aftermath. It may be helpful for staff to educate older children around common emotional responses to disasters, and why hearing other people's frightening stories can sometimes be harmful.
- It may be helpful to gather information ahead of time about varying cultural responses to trauma and death. This can be very helpful in assisting caregivers in understanding family and child reactions.

- Have available a list of community resources (mental health and counseling services, etc.) for distribution to parents/caregivers upon discharge. This can be very helpful in dealing with responses that arise after the immediate emergency is over.
- Identify staff within the hospital that can assist with addressing the emotional and psychological issues (i.e., social workers, psychologists, psychiatrists, chaplains and psychiatric nurses) and have 24-hour contact information and an on-call list available for unit staff.
- Dedicate a 'safe area' where no procedures take place.
- Identify resources for staff support to cope with their impact upon seeing injured and/or dying children.
- Identify community resources that may be able to donate services, supplies, etc., specifically for the children. Distribute a list of community resources to parents/caregivers on discharge.
- As part of disaster preparation, consider developing a disaster behavioral health response team for patient and caregiver support. This team can be activated during response for direct service and Just in Time (JIT) training.

How Children Can React to a Disaster

- Children may react differently to stressful events than adults. Their response may be delayed and hard to detect. They may find it difficult to express their feelings.
- Staff needs to be aware of changes in children's behavior such as new or increased difficulty separating from parents or caregivers, trouble sleeping, change in appetite, bedwetting or regression in toileting, withdrawal or acting out behaviors. Parents, teachers and other caring adults who know the child are in the best position to notice these changes.
- Do not wait for the child to come to you. Ask questions such as "Are you having trouble sleeping?" or "Are you feeling less safe than before?"
- Some children are more likely to have emotional reactions to the events, including:
  - Children who witnessed the event firsthand or whose parent, relative or friend was killed or injured;
  - Children who are displaced from their home or schools;
  - Children who have a history of emotional problems.
  - Children who have a history of trauma, either as a victim or as a witness to violence or abuse; or
  - Children with an adult in their life who is having difficulty with their emotions, or who is a witness to violence or a victim of domestic violence.

Children's response to stressful events may be delayed and hard to detect.

- The chart that follows outlines psychological characteristics of various aged children and suggests caregiver behaviors that support successful interactions. Not all children exhibit all symptoms and their reactions may change over the first days or weeks following a crisis.

Table 6-1: Children's Characteristics, Reactions and Interactions

Age	Characteristics	Typical Reactions	Keys to Successful Interactions
Newborn: Birth to 1 Month	• Likes to be held. • Likes to be kept warm. • May be soothed by having something to suck on or being swaddled	• May startle easily. • May become fussy or agitated when near or held by adults who are experiencing anxiety or upset	• Speak softly. • Use simple words. • Use the child's name. • Avoid loud noises and bright lights.
Infant: 1 to 12 months	• Likes to be held. • Familiar objects from home can be soothing.	• Distress when separated from parents • Distress when approached by someone unfamiliar, usually starting when the child is approximately 6-8 months of age	• Parent/caregiver should always be nearby and hold the child when feasible and allowed to stay with the child. • Enlist the parent's/caregiver's help. • Distract with a toy or penlight. • Examine infants and young children on a parent's lap. • Examining the child in the direction of the toes to the head is less threatening. • Talk to the infant throughout the examination. • Avoid loud noises and bright lights. • Use familiar objects from home such as a stuffed animal, blanket, or toy to help comfort the infant before, during or after a procedure.
Toddler: 1 to 3 years	• Do not like (or are unable) to sit still. • May grab at the penlight or push your hand away. • May refuse to look at you • May try to run	• Have fears of separation from family. • May be unusually fearful, "fussy," clingy and have crying bouts. • Have problems sleeping. • Startle easily.	• Make a game of assessment. • Parent/caregiver should always be nearby and allowed to stay with the child • Adjust your height to that of the child. • Distract the child with a toy or penlight. • Examine in the direction of the toes to the head. • Do not ask the child's permission to perform an examination if it will be performed in any case. • Allow the parent/caregiver to participate. • Respect modesty, keeping child covered when possible. • If possible, let family visit/stay.

Children's Characteristics, Reactions and Interactions, continued

Age	Characteristics	Typical Reactions	Keys to Successful Interactions
Preschooler: 3 to 6 years	• Most can sit still on request. • Understands speech. • May make up explanations for anything not understood. • Learns best through play and "medical play". • Able to make choices when choices are possible. • No clear concept of future events.	• Have fears of being separated from parent/ caregiver. • Can be unusually fearful, clingy and have crying bouts or an increase in tantrums • Regress to outgrown behaviors, such as bed-wetting or baby talk. • Have nightmares or trouble sleeping. • Have stomach aches, headaches or other physical complaints that do not have a medical basis. • Startle easily. • May have loss or increase in appetite.	• Explain actions using simple language. • Tell the child what will happen next. • Tell child just before procedure if something will hurt. • Distract child with a story toy, electronic device. • Respect modesty, keeping child covered when possible. • Do not ask the child's permission to perform an examination if it will be performed in any case. • Parent or caregiver should always be allowed to stay with the child, including overnight if the child is hospitalized, and to remain with the child during procedures when possible. • Allow the child to make choices when possible.
School-Aged: 6 to 12 years	• Expresses feelings and gains sense of control over what is happening to them through play. • Cooperation is gained through trust.	• May have unusual outbursts of anger. • May have nightmares or problems sleeping. • May withdraw from family and friends. • May engage in repeated play that depicts the disturbing events repeatedly. • Can be fearful, anxious or preoccupied with safety and danger. • May revert to outgrown behavior. • Express feelings of guilt. • Have frequent somatic complaints. • Problems focusing, paying attention and with learning new concepts	• Introduce yourself to child at the beginning of the interaction. • Be friendly and sympathetic. • Honesty is especially important. • Describe actions before carrying them out. • Reassure the child if injury is not severe. • Provide developmentally appropriate information and education on what they are dealing with. • Allow the child to make choices when possible.

Children's Characteristics, Reactions and Interactions, continued

Age	Characteristics	Typical Reactions	Keys to Successful Interactions
Adolescent: 12 to 18 years	• Wants to be treated with respect. • May resent not being included in discussions about their treatment. • Values privacy and modesty. • Do not assume teens manage emotions the same way adults do.	• Appetite changes. • May suffer from headaches or gastrointestinal problems. • Loss of interest in social activities. • Sadness or depression. • Feelings of anger and aggression. • Isolation from others and less interest in friendships. • Repetitive behaviors such as hand washing. • Increased risk-taking behaviors • Use of drugs or alcohol to cope • Hopelessness regarding their future	• Introduce yourself at the beginning of the interaction. • Speak in a respectful, friendly manner. • Get history from patient if possible. • Address the adolescent directly, respecting independence. • Respect the modesty of the patient throughout the examination. • Consider when to ask questions about sexual activity, or drug or alcohol use. The patient may be reluctant to answer such questions honestly in the parent's presence. • Allow parents to be involved in the examination if the patient wishes. • If you think the patient may be reluctant to share sensitive information, ask those questions in private

Psychological Triage Following Disaster

Psychological triage should be conducted after a disaster to determine those in need of mental health crisis intervention and to identify those who do not need additional intervention and can manage independently.

Children who are more likely to have a stronger or more problematic emotional response are those who/whose:

- Witnessed the event first-hand
- Parent, relative or friend was killed or injured
- Were separated from parent or caregiver during or after the event
- Experienced subjective panic response
- Were injured themselves
- Feared they would die
- Are displaced from their homes or schools
- Have a history of mental problems
- Have a history of trauma, either as a victim or witness to abuse or violence

Psychological triage should be conducted after a disaster to determine those in need of mental health crisis intervention.

- Have an adult in their life who is having difficulty with their emotions, a witness to violence or a victim of domestic violence

Development-specific Guidelines for Treating Children

Infants

- Try to let a parent/caregiver stay with the baby during medical procedures and, when possible, to hold the baby during that time.
- Use familiar objects from home such as a stuffed animal, blanket, music box or toy to help comfort the baby before, during or after a procedure. (In young infants, use of something like a Sweetie or other sucrose option)

Toddlers and preschool-aged children

- Try not to have conversations about the child's care in their presence unless you are including them in the conversation. Children overhear much more than adults think and without any explanation, the information may seem terribly frightening.
- If the child is hospitalized, let a parent/caregiver stay overnight with the child if possible. If appropriate, let other family members, including brothers and sisters, come and visit or stay.
- If the child is hospitalized, reassure the child that the hospitalization is not a punishment. For example, “we need to make sure you are well enough to go home, and so we’ll have you stay here for a while so that the doctors and nurses can take care of you until we’re sure. Your mom or dad can stay too if you like.” Try to avoid using good/bad labels particularly during a procedure. For example, do not say, "See, you were so good, the doctor only had to do this once." Instead, you can say, "You did such a good job of sitting still. I know that was hard."

Limit children’s exposure to TV programs and adult conversations about the events.

- Children learn best through play and ‘medical play’ that can be particularly useful. Allow them to handle some medical equipment such as a stethoscope, blood pressure cuff, etc. Allow them to practice the procedure on a doll.
- Allow the child to make choices whenever possible, but never offer a choice when none exists. For example, do not say, "Would you like to come into the treatment room now so the doctor can look at you?" It would be better to say, "Do you want to bring your bear or blanket with you into the treatment room?"

All children under age 5

- Try to keep to normal routines and favorite rituals as much as possible.
- Limit exposure to TV programs and adult conversations about the events.
- Ask what has been good today and what has been something hard.
- Observe their behavior and play, watching for indicators that they are processing what has happened to them. For example, repeatedly playing “when the earthquake happened” may allow an opening for adult helpers to assist the child in processing the event
- Asking direct questions, can sometimes make some children resort to yes or no answers or to shut down. It may help them express things if you see and then evaluate if the child is ready to talk. For example, “you seem kind of quiet today, and it makes me wonder if you’re thinking about what happened to you in the _____”

- Give plenty of hugs and physical reassurance, if the child seeks this. Watch for signs that physical contact makes them uncomfortable, such as pulling away or going stiff. Respect their boundaries.
- Provide opportunities for them to be creative and find other ways to express themselves, such as drawing or helping them write a story about the event. An adult writes the story, quoting the child, and the child can draw to illustrate the book.

School-aged children

- School-aged children can be given more specific information about what is going to happen to them. For procedures which most likely would be done in a hospital setting, keep in mind that many medical terms can be confusing for children. For example, the term 'IV' could be confused with the word 'ivy' or 'dye' with 'die.' Give simple, specific explanations for procedures.
- This is a great age for medical play, which involves children communicating their understanding and fears through play with medical equipment. Allow the child the opportunity to reenact events through play with different kinds of toys or art materials. This is an important way for school-aged children to express their feelings and gain a sense of control over what is happening to them.
- Provide opportunities for them to be creative and find other ways to express themselves, such as drawing or helping them write a story about the event. An adult writes the story, quoting the child, and the child can draw to illustrate the book.
- Always respect the child's privacy and encourage others to do the same by knocking before entering the room and being sensitive to who is around when examinations are being conducted.

Do not be afraid to ask children directly what is on their mind and answer their questions honestly.

- Sometimes, when in a stressful situation like being in a hospital, children may regress, or begin exhibiting behaviors that they had grown out of, like thumb sucking and bed-wetting. Do not berate them ("Come on, you're a big girl now!") or punish them for this behavior. Encourage the child to express his/her feelings and discharge emotions through play, storytelling or drawing/painting.
- Do not be afraid to ask them directly what is on their mind and answer their questions honestly. It is fine to ask open ended questions such as "I'm wondering how you are doing with all of this" but do not probe or ask too many questions. Pay attention to non-verbal signs that may indicate the child is not ready to talk, such as ignoring the question, changing the subject, becoming wound up or silly, or leaving the area. Questions expressed via "third person" techniques may help children and teens to talk about their feelings and experiences. For example, "I've found that lots of kids who have gotten separated from their families feel worried about that happening again and think about it a lot."
- Listen to the child's repeated retelling of the event.
- Talk to them about any news that they have seen and any adult conversations that they have heard.
- Make sure they have opportunities to talk with peers if possible.
- Set gentle but firm limits for acting out behavior.
- Encourage verbal and play expression of thoughts and feelings.

Adolescents

- Try not to have conversations about a teen's care in his/her presence unless you are including him/her in the conversation. Adolescents can understand much more about their bodies and what is happening to them than can younger children; because of this they may resent not being included in discussions about their condition or treatment.
- Do not assume that teens manage their emotions the same way as adults do. Give them opportunities to discuss what is happening with staff both with and without the parent/caregiver being present, so they can ask questions. Do not treat the teen's questions as silly or outlandish.

Try not to have conversations about a teen's care in his/her presence unless you are including him/her in the conversation.

- Respect the teen's privacy and encourage others to do the same by knocking before entering the room and being sensitive to who is around when examinations are being conducted.
- Adolescents are particularly concerned about body image. They do not want to be perceived as different from peers because of an illness or injury. Be especially sensitive to the physical changes the adolescent may experience when explaining any procedures, injuries or treatments they may have.

When to Consult a Mental Health Professional

Consultation with a Behavioral Health Professional may be useful:

- When a child exhibits distress or symptoms of depression and anxiety that interfere with their daily functioning.
- If a child exhibits new onset or increase in somatic symptoms such as stomach pain, headache, fatigue
- If a child becomes withdrawn and is avoiding usual activities and other people
- If a child begins to exhibit new or increased aggressive behavior
- If a child has a previous history of a behavioral health disorder

Referral to a Behavioral Health Professional *should be provided* if any of the following are observed or reported:

- Suicidal thoughts or the desire to hurt others
- Self-harming behaviors
- Expressing feelings of being helpless, hopeless, and worthless
- Problematic use of drugs or alcohol
- If the child hallucinates, delusional thinking, evidence of mania
- Aggressive or antisocial behavior
- If a child is identified as at greater risk for a new behavioral health disorder via an evidence-based triage tool such as PsySTART

Supporting Families Following a Disaster

It is important to understand that parents and caregivers have the potential to positively influence their child's post-disaster functioning. It follows that assisting parents and caregivers can have a beneficial impact on the mental health of their children who have experienced the disaster.

In assisting families following a disaster, keep the following in mind in order for your efforts to have the most positive impact:

- Make sure that you do not undermine the parent or caregiver's authority. Solicit information from them about how the child/teen has responded in the past to difficult events. Ask them for their suggestions on how best to support their child, and what has worked in the past for them.
- Support parents and caregivers by listening, answering questions, and providing needed information.
- Assess parents and caregivers for their own level of stress and distress. Offer specific support for them as a way to additionally support their child.
- Point out the family's strengths.
- Encourage parents and caregivers to take care of themselves in order to feel their best and care for the child.
- Connect families with resources in their communities for needed assistance and services.
- Encourage parents and caregivers to re-establish their normal routines of meals and bedtimes for themselves and for their children and teens.
- Encourage family members, including children and teens, to engage spiritual practices which have been helpful to them.
- Inform parents and caregivers about general trauma-related stress symptoms* that their children may experience, such as:
  - Reenacting the disaster/trauma in play
  - Intrusive imagery such as flashbacks
  - Sleep disturbances
  - Somatic complaints
  - Anxiety responses (e.g., hypervigilance, avoidance, fear)
  - Strong emotions such as guilt and anger
  - Disruption in normal social and developmental tasks or performance
- Help parents and caregivers to understand that their children's emotional and behavioral responses after disaster are typical and to be expected.
- Some children may never experience problematic symptoms post-disaster, whereas other children will have symptoms immediately or months/years later
- Provide factual information
- Instill hope about treatment and recovery

Parents and caregivers have the potential to positively influence their child's post-disaster functioning. Encourage them to take care of themselves in order to feel their best and care for the child.

* These symptoms may also indicate post-traumatic stress disorder in children

For additional suggestions on helping families after disaster, see Behavioral Health Toolbox for Families: Supporting Children and Teens During the COVID-19 Pandemic. *(See Attachment 6-A)*

Mental Health Assessment and Intervention

Following a disaster, various assessments can be employed to determine mental health status of children and families. Based on assessment, the child and family can then be directed towards supportive services in the initial disaster phase. In addition, specific psychological triage can identify children at highest risk for new incidence of psychological disorders, which then allows early professional evaluation and treatment as indicated. The particular intervention is dependent on each unique situation (e.g., intensity of mental health impact from the disaster or pre-existing mental health disorders). Consider that a child may not show overt symptoms of having experienced a traumatic event, but may have internalized, repressed or dissociated symptoms that may surface later. Descriptions and an overview of these assessment and intervention types follow:

Assessment types

Informal assessment

- Psychological First Aid (PFA) is the universal intervention of choice in the immediate aftermath of traumatic events.
- The PFA strategy is to assist children's caregivers and families so that the families can help the children, and neighbors and friends can help each other. PFA is:
  - Conversation-based
  - Assesses both the child's and family's post-disaster functioning
- For more information on PFA for children and families see resources below:
  - Psychological First Aid for Children and Parents (See Attachment 6-B)
  - Psychological First Aid for The Community Helping Each Other (See Attachment 6-C)

The PFA strategy is to assist children's caregivers and families so that the families can help the children, and neighbors and friends can help each other.

PsySTART Psychological Triage

- Tracks exposure to certain events predictive of PTSD and Depression
- Identifies children at increased risk for development of new clinical disorders resulting from their exposure and allows for early intervention and treatment
- Does not require direct interview of the child
- Can be done by any trained staff in minutes
- Offers real time situational awareness of pediatric behavioral health impact for hospital and emergency management systems
- For more information on PsySTART Peds see link to resources below:
  - PsySTART Rapid Pediatric Mental Health Triage System: WRAP-EM System End User Manual for WA DOH *(See Attachment 6-D)*

Professional evaluation

- Should be performed by trained behavioral health provider in the event of the following:
  - Child or parent is exhibiting severe symptoms of anxiety or depression impairing their ability to function.
  - Child or parent makes statements indicating thought or intent to harm themselves or others
  - Child is identified as at high risk for potential psychological disorder based on exposure to certain events (e.g. via PsySTART triage)

- May involve surveys, indexes, inventories, checklists and questionnaires as well as clinical interviews
- Can assess both the child's and family's post-disaster functioning

Intervention types

The selected intervention type should depend on when help is being offered, the scope of the intervention(s), and the needs of the survivors and community.

Practicing interventions leads to hope, which is key to recovery.

Universal interventions

- Support parents and caregivers to assist children by attending to basic needs:
- Reuniting children with their families and supportive adults
- Supplying children and their families with food, water, and shelter
- Providing caregivers with information regarding disaster and recovery
- Offering caregivers techniques to help their child's mental health
- Referring children and their families to appropriate resources
- Promote positive coping. Resiliency is often based on temperament but is also a skill that can be learned and practiced.[11] The three factors of resilience are:
  - Connection to others, family, friends, neighbors
  - Flexibility / adaptability. Being able to change as the situation changes vs focusing on the past or worrying about the future
  - Purpose, the motivator for your actions
- Practicing these leads to hope, which is key to recovery
- Address commonly occurring worries/emotions that follow disasters. Simply understanding that what they are feeling is a "common response to an uncommon situation" can reduce stress and promote calm.[12]
- Provide information on common physical and emotional symptoms following a disaster
- Explain how emotions will likely change, based on what is going on with the disaster
- Explain in simple terms how our brains are impacted by disaster, leading us to be more reactive and also to struggle with focus and memory.

Professional interventions

- Used when universal interventions have not reduced the child's distress
- Are trauma informed and evidence-based interventions, such as Trauma-Focused Cognitive Behavioral Therapy
- Appropriate for children who show marked signs of distress that interfere with social behavior, psychological functioning, and/or schoolwork
- Require specialized training, but disaster responders should be aware of these interventions so that they can refer children to specialists and educate children's caregivers
- May be done in group or family settings in order to restore personal safety, normalize experiences, help disaster survivors feel heard / validated and reduce stress

Urgent / crisis interventions

- Used as the most immediate and intense type of intervention, appropriate for:
  - Those with comorbid issues pre-disaster
  - Those exhibiting extremely impaired mental functioning
  - Those at acute risk of hurting their self or others
  - Those with life-threatening medical issues
- Should be activated as part of a full range of intervention types for these children

Understanding Death–developmental And Cultural Considerations

Children and teens need to understand the cause of a death and the meaning of death itself. Understanding the meaning of death includes understanding non-functionality (life stops), irreversibility (death is permanent) and universality (everyone dies). An example of non-functionality that is helpful for young children is "when someone dies, we mean their body totally stops working and it cannot be reversed." Incorporating familial and cultural spiritual beliefs and practices can be a helpful way to process grief and loss.

Developmental stages

Children and teens need to understand the cause of a death and the meaning of death itself.

Pre-verbal

Children under 2 years of age cannot articulate their own feelings verbally, nor easily understand even a simple explanation of death. However, these children do respond to the emotional state of those around them, especially their caregivers. Physical contact, such as hugs and holding the child, are important, as are simply labeling behaviors and feelings (crying, sadness). When a pre-verbal child has lost a parent or family member, it is important to provide as much familiarity and consistency as possible.

Preschool (2 to 5 years)

Preschool children often think death is reversible and temporary, like going to sleep or when a parent goes to work. The child may not understand that people who die will not come back. They require simple explanations and it is common for them to ask the same questions repeatedly. Offer explanations at a developmentally appropriate level, using simple language. Avoid euphemisms which the child may not understand such as “Grandpa passed”. Avoid examples such as “he’s asleep” or “he left us” as these may lead to children developing increased fears of separation or falling asleep. Use simple explanations such as “the doctors and nurses tried very hard to help Grandpa, but his body was too hurt, and he died”. Calmly explain again when the child asks when the loved one will return. Encourage young children to draw pictures about the person who died and about how they are feeling. Encourage talking about favorite memories or stories about the person who died.

School-aged children (5 to 9 years)

Many, but not all children begin to understand the finality of death. Make sure the child does not feel responsible in any way for the death. It is common for children to hear the news that a loved one has died, and to have no outward emotional response at the time. Children will process the loss over time, and if allowed to ask questions, will develop an understanding of their loss and begin to show outward grief. They should be encouraged to share their feelings but not pushed. If an adult notes the child becoming quiet, crying, or having outbursts, they can check in on how the child is feeling. Avoid yes or no questions and use open ended probes. For example, you might say

something like “I saw that you stopped playing and went to your room. It made me wonder if you were having some feelings about your friend who died in the earthquake”. Try to become comfortable with silence and avoid filling it with your own words. This may help the child to open up about how they’re doing. One way to help children become comfortable remembering and talking about the person who died is to help them write a “book”. They can write their own words, or the adult can be a “scribe” and write down what the child says. The child can then draw pictures to add. Headings for pages can be things like “something we did together”, “one thing that was their favorite meal” “one funny thing I remember”, “the thing I will miss the most”

Latency (9 to 13 years)

Children's understanding is nearer to adult understanding of death. They are more aware of the finality of death and the impact the death has on them. Encourage them to talk and talk about the person they’ve lost. Some children enjoy making a memory book, in which they write and draw memories of the person they’ve lost. They might like headers for their memory book on each page, such as “_____ and I liked to do _____ together”. “the funniest thing I remember about _____ is_____”

If appropriate within the family’s culture, children should be encouraged to participate in the rituals and religious rites of the family, including funerals. This allows them the opportunity to take comfort along with the important adults in their lives. If the adults are likely to become overwhelmed emotionally, the child could have an identified supportive adult stay with them during the ceremonies to explain what is going on and comfort them.

Teens (13 to 18 years)

Adolescents generally have an adult understanding about death. They are very reliant on support from their peer group. Although they may indicate that they don’t need adult support, most teens appreciate gestures from the adults who care about them. Occasionally “check in” on how they’re getting through the grieving process. Use of third person questions may help them to express their feelings. For example, “I’ve heard that it’s pretty common for kids to feel mad at someone who has died, and then feel guilty that they’re mad. That sounds really hard”. Teens may benefit from becoming actively involved in planning and participating in the grieving rituals. For example, they may want to help set up for a reception, hand out funeral programs, read something at the ceremony, or be the designated support person for a younger family member.

Giving bad news: The child or teen's developmental and cognitive levels should be taken into consideration when giving information about the death of a parent or family member. For younger children or in the case of a violent, unexpected death, distilling the information in small pieces makes it more understandable cognitively and manageable psychologically.

Cultural differences in dealing with death and dying

Every culture has its own rituals and manner of mourning.

Every culture has its own rituals and manner of mourning. Over time and through immigration and contact between different groups in the US, mourning patterns of ethnic groups have changed and continue to change constantly. Clinicians should be careful about definitions of "normality" in assessing families' responses to death. Additionally, healthcare providers should remember not to assume people within any particular cultural group fit a pattern when mourning. Each family unit and each individual needs to be treated and assessed on an individual case-by-case basis.

It is important for staff to appreciate an ethnic group's particular attitudes about mourning and to find out from a family member what its ethnic group believes about the nature of death, the rituals that should surround it, and the expectations of afterlife.

A failure to carry out death rituals often contributes to a family's experience of unresolved loss.

Helping family members deal with a loss often means showing respect for their particular cultural heritage and actively encouraging them to determine how they will commemorate the death of a relative.

While it is generally better to encourage families toward openness about death, it is also crucial to respect their cultural values and timing for dealing with the emotional aftermath of a loss.

Staff may inquire the following:

- What are the prescribed rituals for handling dying, disposition of the body and to commemorate the loss?
- What are the group's beliefs about what happens after death?
- What are the group's beliefs about appropriate emotional expressions?
- What are the gender roles for handling the death?

Staff should identify personnel in their setting who may be able to provide more details regarding specific cultural groups such as Pastoral Care, Social Work or even particular staff members from various cultural groups.

See *Attachment 6-E* for useful guides on building cultural awareness.

Obtaining Mental Health Services in the Community

Every child experiences emotional difficulties from time to time, but at some point, a child's problems may call for professional attention.

Community mental health resources must be addressed during the disaster planning phase so that the healthcare provider can be confident that a referral will be appropriate. If the facility does not have mental health resources, it is recommended to have referral agreements in place.

In the planning phase, it is important to ascertain the capacity of various mental health providers/facilities for treating families and children of various ages. Contacting the child's pediatrician for a referral to a mental health professional or clinic may also be helpful.

Developing lists of specific referral sources and types as part of disaster plans is encouraged. Contact information should be kept and routinely updated. Lists of sources and how to reach them should be kept in locations/files easily accessed by staff.

Every child experiences emotional difficulties from time to time, but at some point, a child's problems may call for professional attention.

Online Resources for Pediatric Psychosocial Issues

- American Academy of Pediatrics: Children, Terrorism and Disasters
- American Academy of Pediatrics, Psychosocial Issues for Children and Families in Disasters: A Guide for the Primary Care Physician (See Attachment 7-F)
- Clinical Work with Culturally Diverse Dying Patients
- Helping Children Cope with Fear and Anxiety (See Attachment 6-G)
- National Center for Post-traumatic Stress Disorder: Terrorist Attacks and Children
- National Child Traumatic Stress Network
- National Mental Health Information Center Publications on Disaster and Trauma

- New York State Office of Mental Health
- New York University Child Study Center
- NIH After Disaster Fact Sheet (See Attachment 6-H)

Section 7: On-line Pediatric Training

There are many in person pediatric training and courses available offered by multiple professional organizations. (See Table 1-1) These courses are valuable live instruction. They provide the opportunity to interact with fellow students and teachers and oftentimes provide much needed time to do hands on skills practice.

However, these courses are expensive, requiring time away from work and may not be available locally especially in rural community healthcare settings. On-line training provides remote learning options. Below are several videos, resources and trainings that are free and open access, although many do require the user to open an account. Some of these videos are short, succinct and thus provide good "just-in-time" training. Others are lengthier but provide good background information and provide ways to keep pediatric expertise up to date.

General Pediatrics

OPENPediatrics

https://www.openpediatrics.org/

This website provides a large number of pediatric resources and videos. An account is required but is free.

Trauma

Acute Assessment and Management of Pediatric Trauma

https://depts.washington.edu/pedtraum/

In order to meet the "Pediatric Education Requirement" set forth by the Washington State Emergency Medical Services and Trauma System, Harborview Medical Center in collaboration with multiple other entities developed 7 on-line training modules specifically addressing Pediatric Trauma. These training modules were specifically developed for both adult and pediatric trauma centers in the state of Washington, however, the curriculum is available free of charge to all users and providers. These are longer modules and not specifically just-in-time training but are an excellent resource.

- Module 1: Initial Stabilization and Transfer of Pediatric Trauma
- Module 2: Pediatric Airway and Breathing
- Module 3: Pediatric Shock, including Vascular Access
- Module 4: Pediatric Head Injuries
- Module 5: Pediatric Blunt Abdominal and Chest Trauma
- Module 6: Pediatric Sedation and Analgesia
- Module 7: Complications of Pediatric Multi-Organ Trauma and Other Injuries (Drowning, Burns)

Curriculum content was developed by Sanjay Bhananker, MD, FRCA (Associate Professor), Sara Gravelin, MD (Senior Resident), Monica Vavilala, MD (Professor), and Sam Sharar, MD (Professor), from the Harborview Medical Center (University of Washington) Department of Anesthesiology & Pain Medicine. Support for curriculum development and web programming was provided by HHS, HRSA, EMSC, WA state DOH, University of Washington Department of Anesthesiology & Pain Medicine, Harborview Anesthesiology Research Center, Institute for Simulation and Interprofessional Studies

Burn Care

University of Utah Burn Crisis Standards of Care

https://crisisstandardsofcare.utah.edu/Pages/Resources.aspx

The University of Utah has developed a comprehensive set of instructional videos and resources to assist non-burn centers on how to manage burn patients. Adult and pediatric content is mixed throughout, but the videos are short and succinct. An account is required but it is free and once approved it is open access.

For written guidance specifically on the care of pediatric burn patients refer to page 25 of the "Utah Brun Disaster Crisis Standards of Care" 2013 document: "Pediatric Patients <30kg. This is a comprehensive document for burn patient care, from field triage by EMS to rehabilitation and physical therapy.

https://nasemso.org/wp-content/uploads/UT_Burn_Plan.pdf *(Attachment 7-1)*

Neonatal Resuscitation

AAP Neonatal Resuscitation Program Skills Videos

https://www.aap.org/en-us/continuing-medical-education/life-support/NRP/Pages/NRP-Skills-Videos.aspx

Open access, excellent short videos of delivery room neonatal resuscitation.

Resources

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