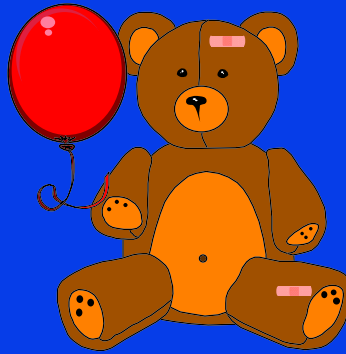


North Carolina Emergency Medical Services
for Children

Enhancement Grant

“Office Preparedness for Pediatric Emergencies”



This presentation is a product of the North Carolina EMSC Enhancement Grant. It is provided by the North Carolina Office of Emergency Medical Services.

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OFFICE PREPAREDNESS for PEDIATRIC EMERGENCIES

Objectives...

- 1. Recognize an emergency*
- 2. Ensure staff preparation*
- 3. Choose approp. equipment*
- 4. Update provider skills*
- 5. Maintain readiness*
- 6. Recognize EMS: member of the team*

These are the objectives for this presentation. The primary goal is to provide the office practice with the skills to recognize and respond to a pediatric emergency.

Scenario:

A six-month old infant is brought into your office during the lunch hour with severe wheezing. The mother tells a receptionist that she didn't think baby could wait until her appointment later that day. The infant has retractions; she then becomes cyanotic and begins gasping.



Read this case scenario and ask questions of the audience: what if this happens in YOUR office? What is the immediate “gut” reaction? The next slide lists a series of questions to ask...

Questions:

- 1. Are your non-medically trained office personnel prepared to respond to this or other emergency situations?**
- 2. Do you have the necessary equipment and medicines needed to manage this infant? Are they readily available?**
- 3. Who will call 911 or your local emergency number? What level of pediatric care is provided by your local EMS system?**

It takes more than just good resuscitation knowledge and skills to provide high quality care during a pediatric emergency. Your office staff needs to be prepared: they need to have adequate knowledge, training and resources to respond to an emergency.

We will review each of these items which should be in place to ensure that your staff and office personnel are prepared to handle a pediatric emergency.

Recognizing an Emergency

- Train your secretary or receptionist how to recognize a pediatric emergency.
- Develop office protocols, including accessing EMS



The first person to assess patients arriving in the office may be the least medically sophisticated employee- a secretary or receptionist. These employees need to be able to recognize emergencies and know how to summon help.

What is a true emergency?

- **labored breathing**
- **cyanosis**
- **stridor or audible wheezing**
- **stupor or coma**
- **seizures**
- **vomiting after a head injury**
- **uncontrollable bleeding**

Secretaries or receptionists should be instructed about signs and symptoms that may signal a pediatric emergency such as: respiratory distress (labored breathing) and/or:

Obstructed Airway (stridor, wheezing, cyanosis)

Shock

Seizures

Meningitis

Sepsis

Ingestion

Trauma

Stupor or Coma

Response to a Pediatric Emergency

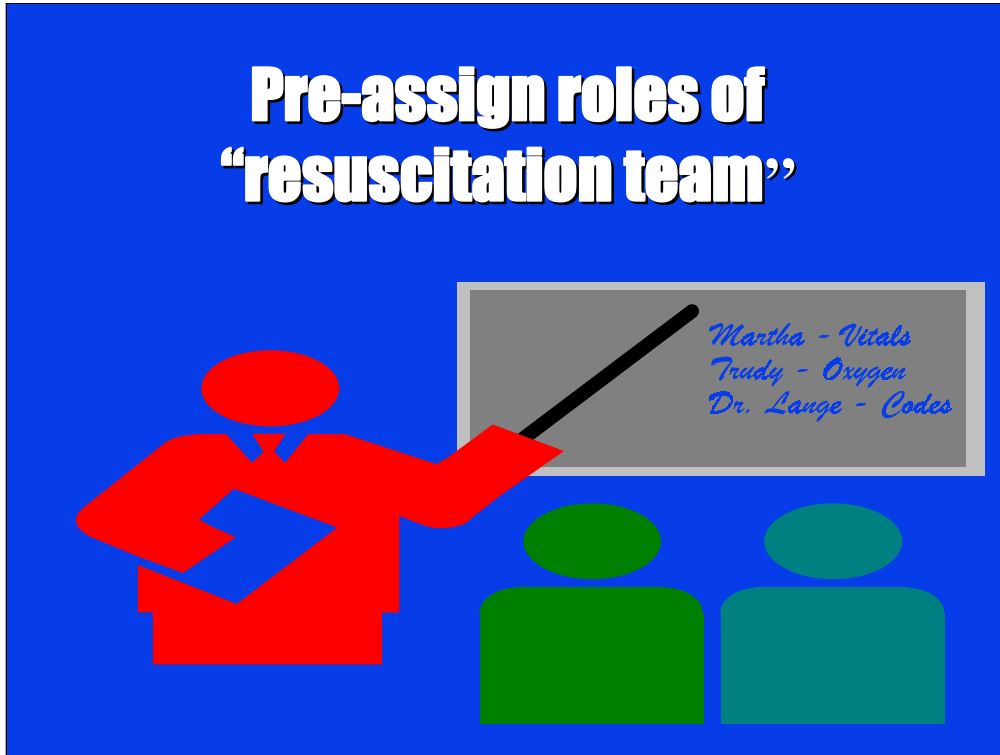
- **Establish and post office protocols regarding:**
 - a. **accessing EMS**
 - b. **notification of provider or nurse.**
- **Have contingency plans for staff if no physician or PCP is in the office**
- **Have office nurse periodically check the waiting area**

A clear response plan should be in place for any emergency recognized in the office. Each member of the staff should have a specific role in the management of an emergency.

For example:

- Determine who is responsible for calling 911 or the appropriate number if 911 is not available in your area
- Identify medical staff members who should be notified by the receptionist who recognizes an emergency

Pre-assign roles of “resuscitation team”



Pre-assign roles of a “resuscitation” team. For example:

- a. Primary care provider “runs the code”, provides medical direction, manages the airway.
- b. Office nurse prepares and administers medications and fluids.
- c. Aide/assistants perform chest compressions.
- d. Secretary activates EMS system, records events during resuscitation.

STAFF PREPARATIONS

- Train receptionist to identify infants and children in distress
- Determine skill level and knowledge of newly employed medical personnel

Be sure that staff members are adequately trained to fulfill their roles in an emergency.

- Provide training for the receptionist.
- Don't assume medical providers are experienced in handling pediatric emergencies.
- Be sure all staff have received CPR training and all medical staff have received resuscitation (e.g. PALS) training.

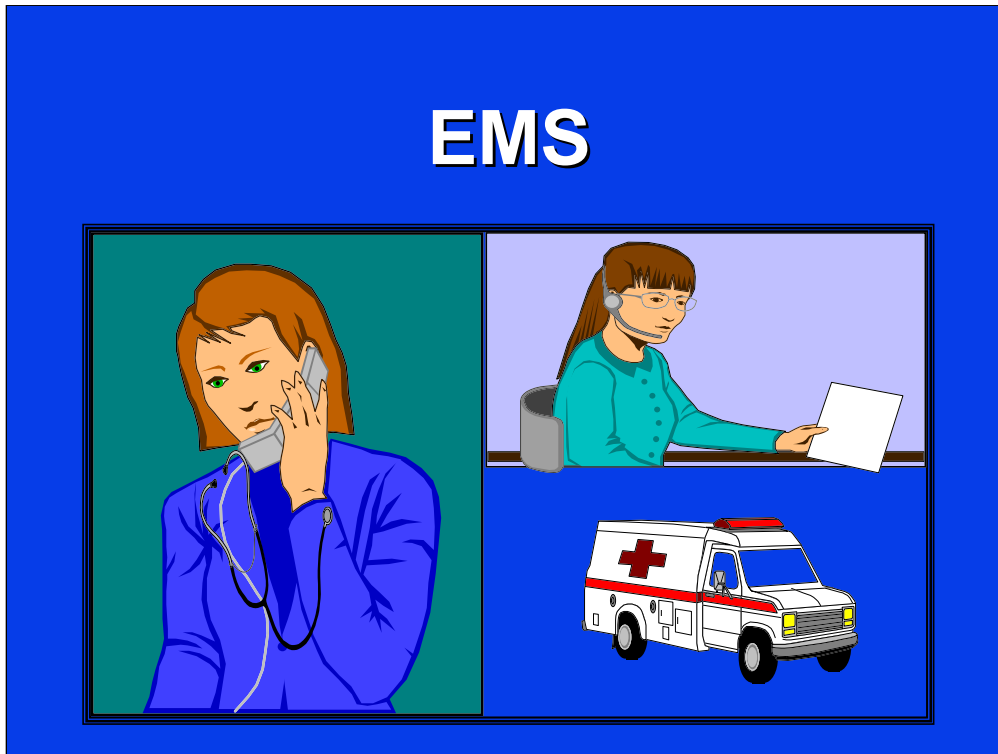
Teach Staff About:

- respiratory distress (stridor and wheezing)
- shock
- anaphylaxis
- seizures



Supplement certifications with teaching specific to the most common problems seen in your office.

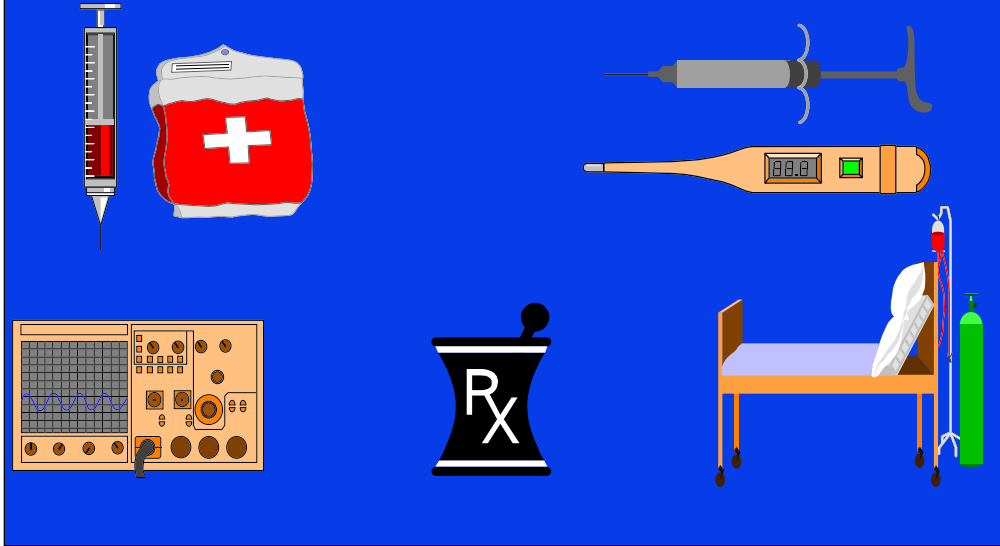
EMS



Teach staff about your local EMS system:

- Emergency Medical Dispatch
 - Know what information is needed by the system:
 - office address
 - patient's age, vital signs, color-coded system color
 - transport destination
 - Need for Advanced Life Support (ALS) unit
- First Responders
 - Who are they? Will a firetruck show up at your door?
- EMTs, Paramedics
 - Different levels in different areas
 - Know what your area offers
 - If your area offers basic life support, you may need to have a plan for who accompanies the child to the hospital

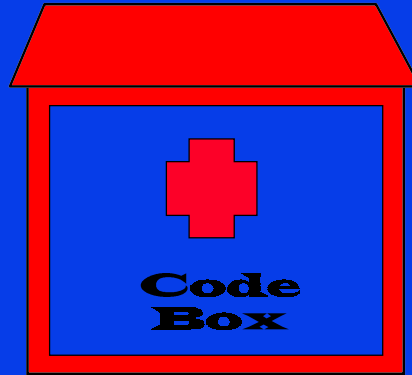
Equipment & Medications



Trained personnel must have appropriate equipment and medications to use at the time of an emergency.

Location of Equipment

- **Resuscitation Room**
- **Code Box**



All office staff must know where resuscitation equipment is located. A resuscitation room can be restocked in an organized way, or an equipment box can be prepared and taken to the site of the resuscitation.

Specialized Organizers

- Bag systems
- Cart systems
- Other items

Equipment and medications should be organized according to the size of the child. A system such as the Broselow-Luten System allows for quick reference to determine appropriate equipment size and appropriate medication dosages.

EQUIPMENT LIST

- Oxygen source
- Oxygen masks
- Self-inflating bag-valve resuscitators
- Nasal cannula
- Nebulizer for inhalation treatments
- Suction apparatus
- Suction catheters
- Oral airways
- Fluids
- IV Access catheters
- Intraosseous needles

Each office should develop a system to ensure that all equipment, medicines, and fluids are re-stocked and readily available.

This is a generic equipment list. A more complete list is contained in the Office Preparedness for Pediatric Emergencies Student Manual.

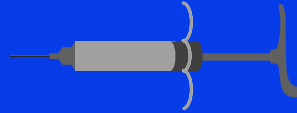
Miscellaneous Equipment

- **Blood pressure cuffs**
- **Nasogastric tubes**
- **Feeding tubes**
- **Monitor**
- **Wt. Based tape**
- **Pediatric backboard**
- **Foley urine catheters**
- **Pulse oxymeter**

This slide lists other equipment that is useful in a resuscitation.

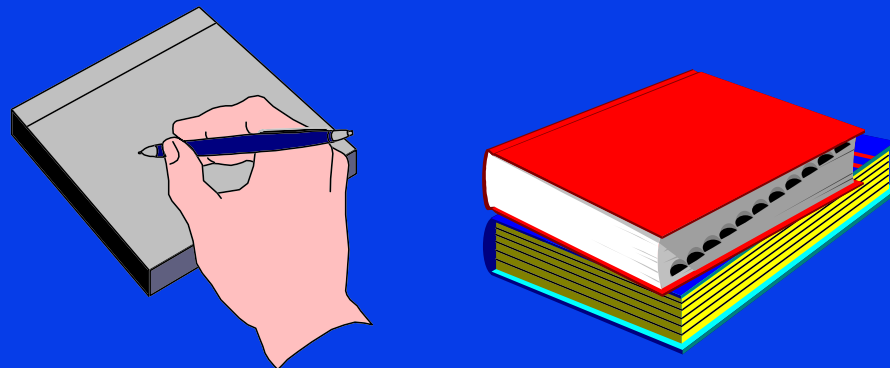
Medications

- Albuterol
- Epinephrine
- Sodium bicarbonate
- D50
- Atropine
- Corticosteroid
- Lorazepam
- Sterile Water
- Nalaxone
- Ceftriaxone
- Diphehydramine



This is a list of suggested medications to have in an office for emergencies. Remember to check for expiration dates.

Maintaining Resuscitation Skills and Knowledge



The primary care provider must be able to provide basic airway management and initial management of shock. Even if these skills were obtained in training, it takes practice to maintain them. Since office emergencies happen so infrequently, care providers need to find a way to be sure resuscitation skills and knowledge are current and kept up to date.

Continuing Education

PALS

ENPC

APLS

CME

Pediatric Life Support (PALS) and Advanced Pediatric Life Support (APLS) courses provide an excellent opportunity to renew knowledge and skills. The PALS course focuses on early recognition of shock and respiratory distress, addressing assessment and management issues. Contact your local chapter of the American Heart Association.

The APLS course was developed jointly through the American Academy of Pediatrics (AAP) and the American College of Emergency Physicians (ACEP). This course addresses pediatric emergencies such as shock and respiratory distress. Additionally topics such as trauma, neurological emergencies, poisonings and others, are covered. This course includes a textbook, labs and small group sessions. Contact ACEP at (214)55-0911 for information.

Emergency Nurse Pediatric Course (ENPC) was developed through the Emergency Nurses Association (ENA). This course covers basic assessment, critical care and emergency pediatric situations. Triage skills and other skills stations are incorporated into small group sessions. Contact ENA at (847) 698-0400 for information.

Maintaining “Readiness” for a Pediatric Emergency

Mock Codes

Scavenger Hunts

Documentation

These courses help maintain provider knowledge skills, but it takes more than this to maintain a state of “office readiness” for a pediatric emergency. One way to ensure readiness is to practice “mock codes” and walk staff members through an emergency scenario. A mannequin can be used to make the practice session more life-like.

Staff members need to be able to identify their tasks and responsibilities during the emergency and demonstrate communication skills, medical skills, etc.

Team members should review each other’s performance and specific action plans for improvement and problem solving should result from the effort (e.g training needs, skills, practice, equipment needs, organizational issues)

Maintaining Readiness

Mock Codes

Scavenger Hunts

Documentation

Scavenger hunts can also be a successful method to uncover equipment and/or medication needs. A staff member is given a list of items needed in an emergency and given a set time (5 minutes) to find them.

Maintaining Readiness

Mock Codes
Scavenger Hunts
Documentation

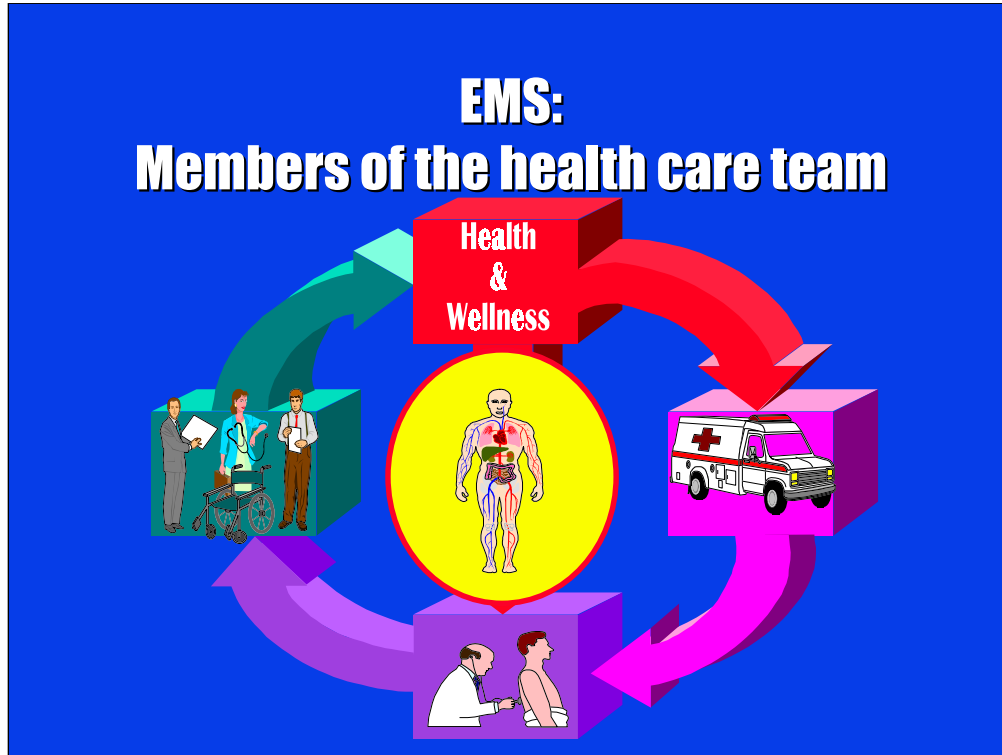
Documentation needs to be part of office training and mock codes. Complete and accurate information regarding resuscitative efforts is vital for ongoing patient care and transfer of care. Yet emergency situations are the most difficult to document properly: stress levels are higher; there are often not enough trained assistants, other than patients in the waiting room must be tended to.

Designate a recorder during every mock code and review the documentation as well as the mock code itself. In addition, keep records of mock codes held in the office with a note of “lessons learned” from each one.

Items to record include:

- Dates and times of treatments; calls for transport
- Stabilization attempts, medication dosages and response, fluid volumes
- Consults obtained and conversations or explanations given to the family
- Patient’s condition at time of departure

EMS: Members of the health care team



If a child requires resuscitation in your office, you may need help from other health care team members to ensure the best possible outcome. Local EMS personnel can provide you with the help you need. Familiarize your staff with the local EMS system

Pediatric Training and Experience



EMS is often looking for additional clinical experience. Invite them to come to your office to observe expert assessment of well and sick children. Have them participate in other mock codes in your office. In NC, EMS communities have come into office settings and provided BLS training to office staff.



EMS can't take care of patients unless they are called. They are well trained in resuscitation skills and are important members of the health care team.

Call 911 or your local access number early

Teach children and parents to call 911/local access number for pediatric emergencies

Too many children still arrive at the Emergency Department in severe distress, having been transported by private vehicle with only one adult (driver) in the car!

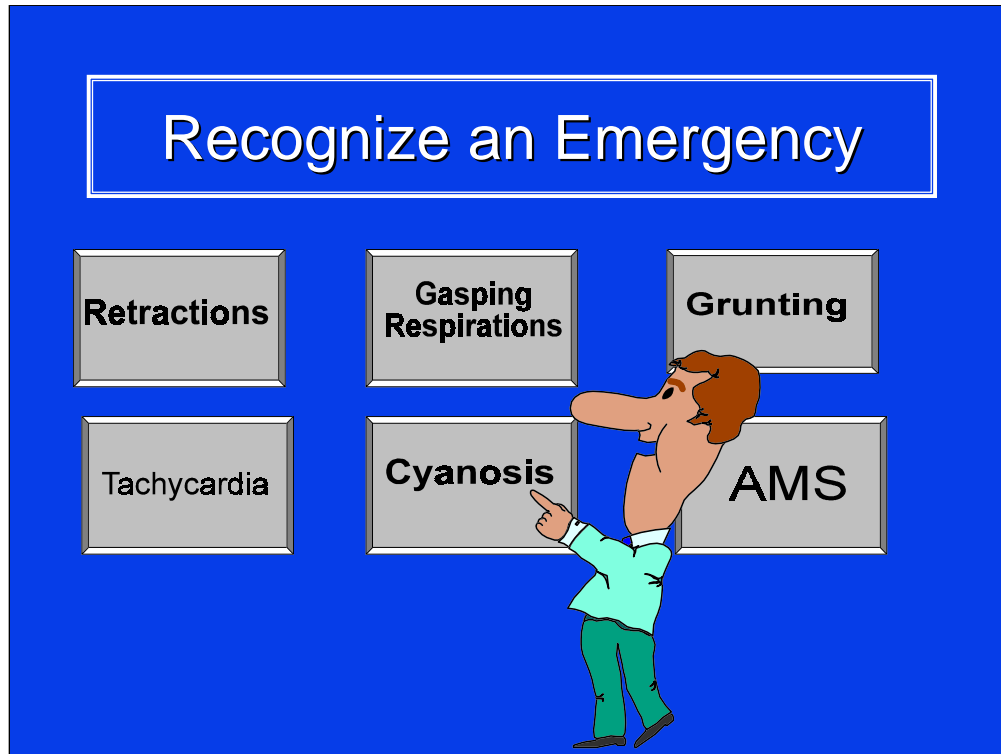
Scenario:

A six-month old infant is brought into your office during the lunch hour with severe wheezing. The mother tells a receptionist that she didn't think baby could wait until her appointment later that day. The infant has retractions; she then becomes cyanotic and begins gasping.



To review...

Now that we have looked at “Office Preparedness for Pediatric Emergencies” from several different perspectives, let’s go back and review the scenario that was described at the beginning of this presentation.



Ideally...receptionist recognizes signs/symptoms of a respiratory emergency:

retractions	cyanosis
gaspings respirations	apnea

The receptionist quickly leads the mother and infant to the resuscitation room and calls loudly for help. The office nurse and provider present in that area respond to her call; the provider starts assessment beginning with the ABCs; the nurse recognizes a cyanotic infant and quickly grabs the necessary airway equipment; the receptionist picks up the closest phone and dials 911, identifying the emergency and requests the highest level of response.

The weight based color coded tape next to the resuscitation bed indicates the infants in the "red" zone. The red box stocked with appropriate equipment is pulled out; appropriate dosages of medications are noted.

The primary care provider begins airway management using bag and mask delivering positive pressure ventilation. The office nurse finds a pulse (rate 140), instructs the receptionist to begin documentation, and begins attempts at IV access. EMS arrives: 1 paramedic and 1 EMT. The infant is being adequately ventilated and appears pink, HR = 150. The local ED has been called and is awaiting the infant's arrival. The infant is transported into the ambulance and because diffuse wheezing is noted, nebulized treatments are begun. Documentation of the office resuscitation is sent to the ED with EMS.

Summary

- *Recognize an emergency*
 - *Staff preparation*
 - *Equipment*
 - *Provider Skills*
 - *Maintain Readiness*
- *EMS: member of the health care team*

Only with practice, hard work, commitment and communication can we hope to provide the highest possible level of pediatric emergency care in the office setting.