

**EMERGENCY MEDICAL SERVICES FOR CHILDREN
RESOURCE CENTER**



***OKLAHOMA
PREHOSPITAL PEDIATRIC SUPPLEMENT
FOR
INFANTS AND CHILDREN MODULE
1995 EMT-BASIC REFRESHER***



**This supplement is a requirement of the Oklahoma State Department of Health
EMS Division for Emergency Medical Technician Recertification**



August 1998

**OKLAHOMA
PREHOSPITAL PEDIATRIC SUPPLEMENT
FOR
INFANTS AND CHILDREN MODULE
1995 EMT-BASIC REFRESHER**

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**Oklahoma Emergency Medical Services for Children
1995 EMT-Basic Refresher**

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EMERGENCY MEDICAL SERVICES FOR CHILDREN

MISSION STATEMENT

The Emergency Medical Services for Children (EMSC) program is designed to reduce child and youth mortality and morbidity sustained due to severe illness or trauma. It aims to ensure state-of-the-art emergency medical care for the ill or injured child and adolescent; to ensure that pediatric service is well integrated into an emergency medical services (EMS) system backed by optimal resources; and to ensure that the entire spectrum of emergency services, including primary prevention of illness and injury, acute care, and rehabilitation, is provided to children and adolescents as well as adults.

THE NEED FOR EMSC

Although recent years have seen great progress in the field of EMSC, much remains to be done. Some of the problems in the current system, identified in a 1991 conference and publication entitled *A Report to the Nation* and further elaborated in the 1993 Institute of Medicine study *Emergency Medical Services for Children*, include the following:

* Curricula in pediatric emergency education and training for EMS personnel are often deficient. For example, many emergency medical technicians (EMTs) have not been trained in basic lifesaving procedures for children, and many emergency care providers lack training in effective communication with children and their families. Frequently, training programs for physicians and nurses are similarly inadequate.

* Proven programs and activities designed to reduce injury among children and adolescents are limited in scope and number. The best EMS system is one that is rarely needed. Since injury causes more death and disability among children and adolescents than all diseases combined, injury prevention is a critical issue for EMSC system.

* Timely and appropriate access to EMS is not always available for the ill or injured child. Currently, for example, ambulance transport is frequently either over-or-under-utilized by the pediatric patient: children who are not seriously ill or injured use ambulances, while those who have life threatening illnesses or injuries frequently do not. Public understanding of the EMS system, including when to use it, is deficient. Geographic distance, particularly in rural areas, is a special barrier to timely EMS access and definitive care for many children.

* Categorization of hospitals for effective pediatric triage is inadequate in many areas. Children are automatically transported to the nearest facility, rather than the one best equipped to provide pediatric care, so that precious time is wasted trying to treat problems with less than optimal resources, staff or equipment. In many places, protocols for transporting children between facilities are inadequate or nonexistent, leading to further delays in definitive care.

- * Many hospital emergency departments and EMS vehicles still do not carry the full complement of equipment and supplies needed for pediatric emergency care. In some places, for example, ambulances lack such pediatric basic items as small IV needles and oxygen masks in children's sizes.
- * Coordination of emergency care with the primary care providers is often lacking. To ensure continuity, primary care providers should be integrated into the EMS system as the lead health care providers for their pediatric patients through a "medical home" model. Besides providing preventive care and anticipatory guidance, the primary care physician should educate children and their families about the availability and appropriate use of the EMS system. They should coordinate the child's care throughout all phases of an acute injury or illness, planning the child's return to the community.
- * There is no uniform national or state data collection system to evaluate the emergency services provided to pediatric patients. Information about the number of children managed in the EMS system, the types of problems they incur, the specific facilities that treat them. The ultimate outcome of treatment is necessary to produce an accurate picture of existing systems and to implement a model system effectively. The effort to define data elements that will ensure consistent, universal and compatible data collection is currently in its infancy.

These problems in pediatric emergency care translate into sub-optimal care for children. Although we do not have data to estimate accurately the number of deaths or disabilities that can be attributed to these inadequacies, we do know that the cost to society for pediatric emergency care is high. For example, emergency department spending in 1987 for children aged birth to 21 years--not including cases serious enough to warrant hospital admission--was estimated to be \$4.309 billion (in 1993 dollars). Clearly a problem of this magnitude deserves concerted attention.

Oklahoma Emergency Medical Services for Children Resource Center has been, and will continue its mission to eliminate all the barriers to the problems that are discussed above. We will strive, with your help to initiate training, collect data, take the initiative in protocol development for Emergency Departments, assist with the development of transport protocols and continue our work in Injury Prevention for the pediatric patient.

In summary, EMSC is part of the EMS system, part of the primary health care system, and part of the public health system. It is embedded in the larger society and reflects its problems. And while EMSC is only one program, it must nevertheless take into account these larger issues and be part of the solution to other problems if, ultimately, it is to succeed.

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INTRODUCTION

In 1993, the state of Oklahoma approved the addition of a Pediatric Supplement to the Emergency Medical Technician - Basic Core Curriculum. On September 14, 1995, the Oklahoma State Department of Health EMS Division approved the 1994 Department of Transportation Emergency Medical Technician - Basic Curriculum. With this change the Transitional Curriculum was also approved as the Refresher course for Basic EMT. The Transitional course has served its purpose as a “bridge” for existing EMT’s to become familiar with the new terminology, AED, and assisting patient’s with certain medications. The Transitional course expires March 31, 1999. The 1995 DOT EMT-Basic Refresher course is the approved course for EMT-Basics to complete for re-certification.

This supplement fills the gap in module VI (**Infants and Children**) for the EMT-Basic Refresher. This supplemental curriculum is presented to all training institutions and in-house programs as part of our continuing goal to enhance the prehospital emergency care of the pediatric patient.

We have listed the cognitive and psychomotor objectives that must be included in the Module. This supplement also includes the **Lesson Plans** that will assist the EMT-Basic Refresher instructor in presenting the additional material for the Infants and Children module. EMSC’s recommendation is to initiate the supplemental material after covering the OB objectives, 1-4. Objective number 5 of the Refresher Curriculum begins the Infant and Children section. The foundation of this section needs to begin with the EMSC supplement. By using this sequence of objectives, this will eliminate “jumping around” objectives.

Instructors are also encouraged to **copy** the “*Student Outline*” for each student. This outline gives the student all of the objectives, and provides them with space for note taking during the instructor’s presentation.

**Oklahoma
Prehospital Pediatric Supplement
for
Infants and Children Module
1995 DOT EMT-Basic Refresher Curriculum**

**EMSC Additional Cognitive Objectives
(Introduced after objective # 4 of Refresher Curriculum)**

1. Define Emergency Medical Services for Children (EMSC)
2. Discuss how an integrated EMSC system can affect pediatric patient outcome.
3. Identify methods / mechanisms of injury prevention for Infants and Children.
4. Distinguish between physical, sexual, and emotional abuse.
5. Describe the range of injuries seen in physically abused, sexually abused, emotionally abused, and neglected infants and children.
6. Describe the procedures required by state law for reporting suspected child abuse.
7. List signs of distress in a child with congenital heart defect.
8. Describe the appropriate Prehospital care of “Special Needs” infants and children.
9. Describe the use of the Pediatric Trauma Score

**Student Psychomotor Objectives
(Introduced after Objective # 3 of Refresher Curriculum)**

1. Demonstrate selection of proper mask and correct performance of BVM ventilation.
2. Demonstrate the correct sequence in airway management for pediatric patients with respiratory insufficiency/failure.
3. Demonstrate proficiency in sizing and placement of an oropharyngeal (OP) airway.
4. Demonstrate the correct technique for sizing and placement of a nasopharyngeal (NP) airway.
5. Demonstrate the correct technique in utilizing the “Broselow Pediatric Emergency Tape”.
6. Demonstrate the appropriate PTS scoring of two (2) pediatric trauma patients

**INSTRUCTOR LESSON PLANS
PREHOSPITAL PEDIATRIC SUPPLEMENT
INFANTS AND CHILDREN MODULE
1995 DOT EMT-Basic Refresher Curriculum**

Cognitive Objectives:

Objective # 1 Define Emergency Medical Services for Children (EMSC).

- A. Definition:** A program designed to reduce child and youth mortality and morbidity due to severe illness or trauma.
- B. History:** 1984 Legislation enacting the use of federal funds. Public Law (102-410)
- C. Management (National):** Maternal Child Health Bureau (MCHB).
National Highway Traffic Safety Administration (NHTSA).
- D. Management (Oklahoma):** Oklahoma University Health Sciences Center
Department of Pediatrics, Section of General Pediatrics, Children's Hospital of Oklahoma.
- E. National Resource Center:** Emergency Medical Services for Children
111 Michigan Avenue, N.W.
Washington, DC 20010-2970
<http://www.ems-c.org>
- F. Oklahoma Resource Center:** EMSCRC
Department of Pediatrics
Section of General Pediatrics
Room 1B 1303 P.O. Box 26901
Children's Hospital of Oklahoma
Oklahoma City, OK 73190
(405) 271-3307 Fax (405) 271-8709
w3.uokhsc.edu/emsc
- G. Education and Training:**
1. Prehospital Curricula
 2. Pediatric Advanced Life Support
 3. Emergency Pediatric Care Course
 4. Injury Prevention Programs
 5. Bystander Care Programs
 6. Childcare Health and Safety Courses
 7. Pediatric Education Resource Library

Objective # 2 Discuss how an integrated EMSC system can affect patient outcome.

- A. Integrated EMSC Systems:** The EMSC system affects the following areas:
1. Prevention
 2. Prehospital Services
 3. Emergency Departments
 4. Intensive Care Units
 5. Rehabilitation
 6. Community Follow-up
 7. Psychological Services

- Affects on Patient Outcome:**
1. Reduction of death and disability from pediatric emergencies.
 2. Reduction of negative impacts from pediatric emergencies on families and communities.
 3. Reduction and prevention of pediatric emergencies themselves.

Objective # 3 Identify methods / mechanisms of Injury Prevention for Infants and Children.

- Methods / Mechanisms:**
1. Teacher training in First Aid & CPR.
 2. Require CPR certification for High School graduation / drivers license.
 3. Primary Care Providers who teach child injury prevention.
 4. Injury Prevention programs taught in schools.
 5. EMT's and Paramedics teach Injury Prevention in their community.

Objective # 4 Distinguish between physical, sexual, and emotional abuse and neglect.

OVERVIEW

Definition: Child abuse is harm or threatened harm to a child's health or welfare by a person responsible for the child's health or welfare.

Abuse: Includes sexual abuse, sexual exploration or non-accidental physical or mental injury.

Neglect: Includes failing to provide adequate food, clothing, shelter, or medical care.

- A. Description of the Problem:**
1. Child abuse is a complex health and social problem.

- * *It is on the increase in today's society.*
 - * *It occurs in all socioeconomic groups.*
2. It is estimated that 1-3% of children in the United States are abused or neglected.
 - * *Approximately 2,000-5,000 children die each year in the U.S. from injuries resulting from child abuse.*
 - * *In infants under 6 months of age, child abuse is a major cause of death, second only to SIDS.*

B. Psychosocial Contributors to Child Abuse:

The abusive situation is usually precipitated by a crisis, which might be the “straw that broke the camel’s back”.

1. It is usually associated with a long series of parental frustrations or an inability to cope with problems.
2. The child may have characteristics that place them at high risk for abuse.
 - a. Chronically ill
 - b. Premature infant
 - c. Physically deformed
 - d. Hyperactive and difficult to manage

Objective # 5 Describe the range of injuries seen in physically abused, sexually abused, emotionally abused, and neglected children.

A. Physical abuse:

1. Physical abuse involves trauma to the soft tissue, skeleton, central nervous system, abdominal organs, or teeth.
2. Trauma inflicted by beating, burns, shaking, throwing against a wall or on the ground, binding and gagging, twisting extremities, poisoning, or starvation.
3. Patterns of physical abuse:
 - A. Burns**
 1. Small, round burns or scars, often from cigarettes.
 2. Glove or stocking burns from immersion of hands or feet in hot water; no splash marks.
 3. Demarcated burns in the shape of the object, i.e., iron.

B. Beatings:

1. Slap marks in the shape of a hand.

2. Welts showing the shape of the instrument used.
3. Suspicious bruises in various stages of healing.
4. Active children normally have bruises over bony prominence such as the knees, shins, forehead, and lower arms which are caused by falls and play.
5. Suspicious sites for bruises are the upper arms, trunk, upper anterior legs, sides of face, ears, neck, genitalia, and buttocks.

C. Shaken Baby Syndrome:

1. Baby is shaken in frustration and then thrown down.
2. Bruising and torn blood vessels are caused as the brain stretches and bounces on each side of the skull, resulting increased intracranial pressure (ICP).
3. Physical indicators or signs vary greatly, from a total of signs to those that indicate significant closed head injury. including those signs common for increased ICP, bruising of the shoulders and upper arms may be seen.

D. Miscellaneous patterns:

1. Human bite marks.
2. Marks indicating the child was bound and gagged.
3. Fractures noted by poor limb alignment or unwillingness to use an extremity. May be numerous fractures on X- rays.

B. Sexual Abuse:

1. These sexual contacts may include sexual assault or physical force, not only intercourse:
 - a. Fondling
 - b. Sodomy
 - c. Exhibitionism
 - d. Child pornography and prostitution

2. Signs of sexual abuse are subtle.

If sexual abuse is suspected, protection of the victim Is essential. Safeguarding clothing and other materials you think may be involved.

3. Overt signs of sexual abuse:

- a. Bruising of the genitalia.

- b. Lacerations indicating vaginal or anal penetration.
- c. Semen on clothing or body.
- d. Discharge from the vagina or penis, indicating possible STD.

C. Emotional Abuse:

1. Emotional abuse involves failure of the parents to provide the child with support necessary for the development of a sound personality.
2. This may occur by intimidation, subtle or overt, rejection, threats, or excessive criticism.
3. This is the most difficult form of abuse to identify and often goes unidentified.

D. Neglect:

1. **Neglect involves the willful or unintentional absence of care for a child's basic life or health in jeopardy:**
 - a. Lack of adequate nutrition.
 - b. Lack of medical care.
2. **Signs of neglect:**
 - a. Child unbathed and wearing unusually dirty clothes, poor hygiene.
 - b. Poorly nourished, small and underweight for age.
 - c. Inappropriately dressed for the season or the weather.

Objective # 6. Describe the procedures required by state law for reporting suspected child abuse.

I. REPORTING SUSPECTED ABUSE

A legal obligation exists to report suspected abuse. A report of suspected abuse is only a request for an investigation. If additional incidents of abuse occur after the initial report has been made, make another request for investigation. If transportation to the hospital is imminent, report suspicions to the hospital personnel. Notify the Department of Human Services county office or call the Child Abuse Hotline at 1-800-522-3511. This number is answered 24 hours a day. In OK County call (405) 841-0800.

A. Vital History Includes:

1. How and when did the injury occur?
2. Who was with the child or found the child and did anyone witness the event?
3. Has the child been moved from the scene?
4. Are there other noticeable injuries that the parent or care provider doesn't account for?
5. Is the injury probably for the environment and developmental skills of the child?
6. Do your findings not match the history given?

7. Does information change with further questioning?

B. Documentation Guidelines:

1. Report everything heard and seen in a factual manner.
 - a. Use direct quotations, not a summary of what was said.
 - b. Include any discrepancies noted in stories of persons present.
2. Record the child's condition and physical injuries as you would for any case.
 - a. Describe injuries by appearance, shape color, size location, and stage of healing. Do not describe shape of injury by object presumed to have caused the injury.
 - b. Draw pictures of shapes of injuries and their location on the body.
3. Describe the setting of the child's injury and the setting where the EMT first saw the child.
4. Record the parents' and child's behavior and their interaction with each other.

C. Oklahoma State Law Handout :Appendix A

II. REACTION OF THE EMS PROVIDERS

It is common for EMT's and paramedics to have strong emotional reactions to child abuse cases, such as anger, frustration, disbelief, and horror.

1. These feelings can get in the way of care.
2. Remember you are the child's advocate.
3. The best way to help the child is to remove them from the situation and take them to the hospital.

Objective # 7 List signs of distress in a child with congenital heart defect.

CONGENITAL HEART DISEASE

A. Definition:

A variety of birth defects in the heart or its adjacent blood vessels where the blood is permitted to mix in the two circulatory pathways (unoxygenated blood to the lungs and oxygenated blood to the body).

** When blood from the two circulatory pathways mix, hypoxemia usually results.*

B. Assessment:

1. Historical data:

- a. Parents generally know when children have a heart defect.
- b. What is the child's usual color?

2. Signs and symptoms:

Child in need of care generally develops respiratory distress associated with an acute illness, congestive heart failure, or a "cyanotic spell".

** Difficulty breathing, tachycardia, altered LOC, cool, moist skin, easily tired and irritable.*

C. Management:

1. BLS management:

- a. Monitor ABC's and vital signs.
- b. Maintain airway.
- c. Administer high-flow O₂.
- d. Assist ventilation as needed.
- e. For a cyanotic spell, place the child in knee-chest position.
- f. Prepare to perform CPR.
- g. Transport immediately and contact medical control.

Objective # 8. Describe the appropriate Prehospital care of "special needs" infants and children.

CHILDREN DEPENDENT ON HIGH-TECHNOLOGY EQUIPMENT

Children are now cared for at home by their parents with highly sophisticated equipment for a variety of chronic or terminal illnesses.

1. Premature babies with chronic lung disease.
2. Advanced cystic fibrosis.
3. Chronic diarrhea.
4. Heart defects who get fatigued sucking a bottle.
5. Equipment found in the home includes:
 - a. Ventilators, suction equipment, O₂.
 - b. IV infusion pumps, feeding pumps.

A. Reasons Why EMS is Activated:

1. Parents have been taught to manage their child's care and to treat most common emergencies.
2. Generally called to help in times of crisis.
 - a. Severe respiratory distress or respiratory arrest.
 - b. Life supporting equipment malfunction.

B. BLS Management:

1. Monitor ABC's.
2. Support the efforts of parents who may already be providing emergency care such as CPR. It is not always necessary to take over for them.
3. In cases of equipment malfunction, attach child to your equipment. Vendors will repair the child's equipment.
4. Provide rapid transport and have the hospital notify the child's physician.

Pediatric Trauma Score

A. Overview

The Pediatric Trauma Score is scoring tool used in evaluating the severity of injury in the pediatric patient in Oklahoma. The PTS is the approved method of triage used by Children's Hospital of Oklahoma, The Children's Hospital at St. Francis in Tulsa and the Oklahoma Trauma Registry. The PTS adjusts it's scoring areas to account for the physiological and anatomical differences unique to the pediatric patient in turn more accurately identifying the critical patient. The PTS also allows for data gathering efforts which will be especially important with the development of a statewide trauma system and trauma registry. Locally the PTS can provide data on injury patterns for a geographical location which can be used to develop injury prevention programs and continuing education programs for EMS personnel.

B. PTS Components and Scoring

The PTS consists of six parameters which are common determinants of the clinical condition in the injured child. During the initial assessment of the injured child each parameter is assessed and given a numeric score based upon it's three associated variables: **+2 (no injury or non-life threatening), +1 (minor injury or potentially life-threatening), or -1 (life-threatening). Totals can range from a +12 to a -6 with the range of <8-9 being the critical break point for transport to a comprehensive pediatric trauma care facility.**

1. Size

Patient size is one of the most obvious parameters assessed. The smaller the child the greater the risk for severe injury due to an increased body surface-to-volume ratio and a potential for limited physiological reserve. Because there is less volume, energy is displaced over a greater portion of the body which increases the potential of multi-organ or organ system involvement.

Additionally younger patients are more susceptible to thermal stresses due to the lack of a fully development hypothalamus which regulates heat loss and gain.

The scoring is as follows:

+2 >20 kg (44 lbs)

+1 10-20 kg (22 - 44 lbs)

-1 <10 kg (22 lbs)

2. Airway

As with all patient groups airway assessment and management is a first priority . However it becomes even

more important in the pediatric patient because establishment of a patent and secure airway can be quite difficult due to the anatomical differences found in their airway structures as compared to the adult. It is because of the potential difficulty in establishing and keeping a patent airway that we see the PTS scores the airway component by the difficulty in it's management. Respiratory failure is the primary cause of death in most pediatric patients, aggressive management to control the airway should be instituted without delay. All

pediatric trauma patients should receive supplemental O₂

Scoring of the airway parameter is as follows:

+2 (Normal, no management necessary to provide an airway)

+1 (Constant observation needed to ensure an airway, use of basic airway management techniques, i.e. positioning, use of suction)

-1 (Use of airway adjuncts both basic and advanced are needed to maintain airway)

3. Systolic Blood Pressure

Assessment of the hemodynamic state of the pediatric patient is of utmost importance since their circulating volumes are significantly less than the adult. Along with this smaller volume, children often do not show classic shock signs until late due to their healthy cardiovascular system and it's reserve capacity.

The healthy heart has a 300% reserve capacity as a pump to help maintain the cardiac output longer. Most of the time B/P usually will not show signs of change until after 25% of the total volume has been lost. With the new EMT curriculum B/P determination in pediatric populations are correlated to other cardiovascular signs such as peripheral pulses and capillary refill times. No matter which assessment is made it is important that any changes be noted and scored. **The**

scoring of this parameter is as follows:

+2 (Systolic B/P >90, radial or brachial pulses present or capillary refill times of < 2 sec)

+1 (Systolic B/P 50-90, carotid pulses, or cap refill times >2<4 sec)

-1 (Systolic B/P <50, nonpalpable pulses radial or carotid, or cap refill >4 sec) .

4. LOC / Central Nervous System

As with adults the assessment of the child's level of consciousness is one of the most important determiners of the potential for CNS injury. Any change in the level of

consciousness will cause the score to be reduced no matter how brief the period of time. **The scoring of this**

parameter is as follows:

+2 (Alert / Appropriately Awake with no loss of consciousness)

+1 (Any loss of consciousness no matter how brief, Obtunded)

-1 (Unresponsive, comatose)

5. Muskloskeletal / Fractures

Because children's bones are more pliable and cartilaginous energy is transmitted throughout the body . Adults bones will break when forces are applied to them but a child's bones flex and give allowing the traumatic forces to be transmitted to underlying organ's. The skeletal framework doesn't cover the same organs as in the adult. The costal arch is a good example of this as the lower portion of each lung and large areas of the liver and spleen are more exposed in the child than in the adult.

This parameter is scored as follows:

+2 (No evidence of fracture)

+1 (Single, isolated closed fracture)

-1 (Multiple, closed, or, any open fractures) .

6. Wounds

Injuries affecting large areas of soft tissue or soft tissue of the trunk and abdomen in the child can be much more serious than in the adult. This increase in potential of seriousness is due to the fact that children have less muscle and body fat than adults to disperse the energy of the trauma. Forces applied to the outer surface of the body of a child are more readily transmitted to the core of the body and the vital organs of the trunk. This applies to both blunt and penetrating trauma but with much more emphasis applied to any type of penetrating wound.

The scoring for this parameter is as follows:

+2 (No wounds, no skin disruption)

+1 (Minor wounds involving the cutaneous layer only)

-1 (Major open wounds or any type of penetrating wound)

Psychomotor Objectives:

Objective # 1 Identify indications for basic airway management in the pediatric patient.

INDICATIONS FOR BASIC AIRWAY MANAGEMENT

A. Medical:

1. Cardiopulmonary arrest.
2. Respiratory arrest.
3. Non-purposeful or no response to pain AND respiratory rate > 60/min.
respiratory rate < 12/min.
4. Airway obstruction.

B. Trauma:

1. Traumatic full arrest.
2. Traumatic respiratory arrest.
3. Head trauma with no purposeful response to pain or unresponsive.

Objective # 2 Demonstrate the correct sequence in airway management for pediatric patients with respiratory insufficiency/failure.

A. Assess patient:

Perform airway assessment:

- a. Observe the work of breathing, accessory muscle use, respiratory rate, mental status.
- b. Auscultation of chest at 3rd intercostal space, mid-axillary line.

B. Manage early respiratory insufficiency/failure:

1. Assure airway is open.
 2. Position of comfort.
 3. Provide supplemental oxygen.
 4. Give nothing by mouth.
 5. Transport.
-
1. Head and jaw position.
 2. BLS obstructed airway maneuvers:
 - a. Back blows and chest thrusts < 1 year.
 - b. Abdominal thrusts (Heimlich) > 1 year.
 3. O₂ by mask/nasal cannula.
 4. Oropharyngeal/nasopharyngeal airway.
 5. Bag-valve-mask (BVM) ventilation.

Objective # 3 Demonstrate proficiency in sizing and placement of an oropharyngeal (OP) airway.

A. Indications for insertion of OP airway:

1. Assessment of respiratory insufficiency.
2. Assessment of respiratory failure.

B. Contraindications to OP airway:

1. Conscious or semi conscious patients with gag **insertion of** reflex.
2. Unconscious patient who may have ingested a caustic or petroleum based product.

INSERTION OF OP AIRWAY:

1. Determine the appropriate size of airway:
 - a. Use Broselow Tape.
 - b. Measure on patient.
 1. Place OP airway next to face with the flange at the level of the central incisors, and the bite block segment parallel to the hard palate.
 2. The tip of the appropriate size OP airway should reach the angle of the jaw.
2. Position patient's airway.

A. Medical:

1. Head tilt/chin lift. Degree of extension of the head varies - infants and toddlers: neutral sniffing position.
2. May use towel under the shoulders.
3. Hyperextension should be avoided as it may cause airway obstruction.

B. Trauma:

- Jaw thrust with in-line spinal stabilization.
1. Open patient's mouth by applying thumb pressure on chin.
 2. Insert OP airway:
 - a. Depress tongue with a tongue blade (if available).
 - b. Place OP airway down into mouth until flange rests against lips.
 - c. If tongue blade is not available, point the OP airway tip toward the roof of the mouth to depress tongue, then insert OP airway until flange is against lips; gently rotate 180° into position. Flange should be resting against lips.

C. Complications of incorrect OP airway size:

1. If OP airway is too small, the tongue may be pushed back into pharynx obstructing the airway.
2. If OP airway is too large it may obstruct the larynx.

D. Complete OP airway insertion procedure:

1. Reassess airway, reposition if necessary.
2. Dispose of, and/or clean contaminated equipment using approved technique.

Objective # 4 Demonstrate the correct technique for sizing and placement of a nasopharyngeal (NP) airway.

Indications for sizing and placing NP airway:

1. Assessment of respiratory insufficiency.
2. Assessment of respiratory failure.

Contraindications to use of NP airway:

1. Patients < 1 year of age.
2. Nasal obstruction.
3. Potential basilar skull fracture.
4. Major nasofacial trauma.

PREPARATION FOR INSERTION OF NP AIRWAY

A. Medical:

1. Head tilt/chin lift
(Degree of extension of the head varies: Infants and toddlers: neutral sniffing position).
2. May use towel under the shoulders.
3. Hyperextension should be avoided as it may cause airway obstruction.

B. Trauma:

Jaw thrust with in-line spinal stabilization.

Sizing and placing NP airway:

1. Select the appropriate size of NP airway:
 - a. Diameter: outside of NP airway should not be larger than diameter of nares.
 - b. Length: place NP airway next to face, measure from tip of the nose to tragus of the ear (the tragus is the small cartilaginous projection in front of the opening of the ear).
2. Adjust movable flange (if present) up or down as necessary to provide appropriate length.

NP airway insertion:

1. Lubricate NP airway with water soluble lubricant
2. Insert airway:

Right naris:

 - a. Insert with bevel towards septum (center of nose).
 - b. Advance tip directed along floor of nasal cavity.
 - c. Advance until flange is seated against outside of nostril - tip should be in the nasopharynx.

Left naris:

 - a. Insert airway upside down with bevel towards septum.
 - b. Advance tip directed along floor of nasal cavity.

- c. Rotate tube 180° after inserting airway approximately 1 inch.
3. Caution should be used as insertion of the NP airway may lacerate adenoidal tissue or mucosa, causing bleeding into the posterior pharynx or trachea.
4. No blanching of nares should occur after insertion.
5. Reassess airway after insertion.

Complete procedure:

Dispose of, and/or clean contaminated equipment using approved technique.

Complications of nasopharyngeal insertion:

1. Small diameter airways may become obstructed **airway** by mucus, blood, vomitus or the soft tissues of the pharynx.
2. If airway is too long may cause vagal stimulation or enter esophagus causing gastric distention.
3. Airway may precipitate laryngospasm and vomiting in responsive patients.

Objective # 5 Demonstrate the correct use of the “Broselow Pediatric Emergency Tape”.

Preparation:

1. Place patient in supine position.
2. Remove tape from package and unfold.

Procedure:

1. Place tape next to patient, ensuring that side “A” or the multi-colored side is facing up.
2. Place the red end of the tape even with the top of the patients head.
3. Place the edge of one hand on the red end.
4. Starting from the head, run the edge of the free hand down the tape.
5. Stop hand even with the heel of the foot. (**If the child is larger than the tape, refer to the appropriate adult technique.**)
6. Verbalize the color or letter block on the edge of the tape and weight range where the free hand has stopped.
7. Use the selected color or letter block to identify the appropriate size of equipment.

Objective # 6: Apply the Pediatric Trauma Score (PTS) in two (2) simulated scenario’s.

APPENDIX A

**CHILD ABUSE/NEGLECT
HANDOUT**

OKLAHOMA STATE LAW RELATING TO THE REPORTING
OF SUSPICION OF CHILD ABUSE OR NEGLECT

846. Mandatory reporting of physical abuse of children - Every physician or surgeon, including doctors of medicine and dentistry, licensed osteopathic physicians, residents and interns, examining, attending or treating a child under the age of eighteen (18) years and every registered nurse examining, attending or treating such a child in the absence of a physician or surgeon, and every other person having reason to believe that a child under the age of (18) years has had physical injury or injuries inflicted upon him or her by other than accidental means where the injury appears to have been caused as a result of physical abuse or neglect, shall report the matter promptly to the county office of the Department of Institutions, Social and Rehabilitative Services in the county wherein the suspected injury occurred. Provided it shall be a misdemeanor for any person to knowingly and willfully fail to promptly report any incident as provided above. If the report is not made in writing in the first instance, it shall be reduced to writing by the maker thereof as soon as may be after it is initially made by telephone or otherwise and shall contain the names and addresses of the child and his or her parents or other persons responsible for his or her care, the child's age, the nature and extent of the child's injuries, including any evidence of previous injuries, and any other information that the maker of the report believes might be helpful in establishing the cause of the injuries and the identity of the person or persons responsible therefor if such information or any part thereof is known to the person making the report.

The county office receiving any report as herein provided shall immediately investigate said report and forward its findings to the district attorney's office in the county wherein the suspected injury occurred together with its recommendation as to disposition. In addition, a copy of the findings shall be sent to the Child Welfare Division of the Department of Institutions, Social and Rehabilitative Services which shall be responsible for maintaining a permanent central registry, suitably cross-indexed, of all such reported findings. Any information contained in the central registry shall be available to any county office and to any district attorney's office or public law enforcement agency investigating a report of suspected child abuse or neglect. The Department of Institutions, Social and Rehabilitative Services may promulgate rules and regulations in furtherance of the provisions of this section.

All records concerning child abuse shall be confidential and shall be open to inspection only to persons duly authorized by the State or United States in connection with the performance of their official duties. It shall be unlawful and a misdemeanor for the Commission, or any employee working under the direction of the Department of Institutions, Social and Rehabilitative Services or any other public officer or employee to furnish or permit to be taken off the records any information therein contained for commercial, political or any other unauthorized purpose.

No provision of this section shall be construed to mean that a child has been abused or neglected because said child's parent, guardian or custodian in good faith selects and depends upon spiritual means or prayer for the treatment or cure of disease or remedial care of such child.

847. Immunity from civil or criminal liability. Any person participating in good faith in the making of a report pursuant to this act shall have immunity from any liability, civil or criminal, that might otherwise be incurred or imposed. Any such participant shall have the same immunity with respect to participation in any judicial proceeding resulting from such report.

848. Admissibility of evidence. In any proceeding resulting from a report made pursuant to this act or in any proceeding where such a report or any contents thereof are sought to be introduced in evidence, such report or contents or any other fact or facts related thereto or the condition of the child who is the subject of the report shall not be excluded on the ground that the matter is or may be the subject of a physician- patient privilege or similar privilege or rule against disclosure.

CHECK LIST FOR DETECTION OF POSSIBLE
ABUSE OR CHILDHOOD INJURY

THE CHILD

History

1. An unexplained injury in a young child: especially a fracture in a child under two years of age.
2. An accident history which does not adequately account for the child's injury.
3. An accident history inconsistent with the developmental age of the child.
4. History of a previous accident, easy bruising or frequent falling in a young child.
5. X-ray evidence of unsuspected skeletal trauma.
6. Alleged self-injury in a small baby.
7. Delay in seeking medical care for a significant injury.

Observations

1. Failure to thrive (height and/or weight in less than 3rd percentile).
2. Developmental retardation.
3. Evidence of disturbed parent-child interaction: lack of attachment of child to mother and inappropriate maternal empathy.

Physical Examination

1. Skin and Subcutaneous tissue- (a) Cradle cap, diaper rash, uncleanliness and other evidence of unconcern or unawareness of infant's needs; (b) Cigarette burns, bite marks, grab marks, belt lashes; (c) Ecchymoses, hematomas, abrasions and lacerations unusual for the child's developmental age; (d) Injury of external genitalia; (e) Marks on neck from strangling by hands or rope; (f) External ears traumatized by pinching, twisting, and pulling; (g) Unusual skin rashes which defy dermatologic diagnosis; (h) Burns, particularly of the soles of the feet and buttock.
2. Skeletal system- (a) Tenderness, swelling and limitation of motion of an extremity; (b) Periosteal thickening; (c) Deformities of long bones.
3. Head- (a) Cephalhematomas; (b) Biparietal bossing suggesting subdural hematomas; (c) Irregularities of contour resulting from skull fractures; (d) Signs of intracranial trauma.
4. Eyes- (a) Subconjunctival hemorrhages; (b) Traumatic cataracts; (c) Retinal hemorrhages; (d) Papilledema.
5. Ears- (a) Ruptured ear drums from blows to the head.
6. Face- (a) Periorbital ecchymoses; (b) Displaced nasal cartilage; (c) Bleeding from nasal septum; (d) Fractures of the mandible.
7. Mouth- (a) Lacerated frenulum of upper lip; (b) Loosened or missing teeth; (c) Burns of lip and tongue.
8. Chest- (a) Deformity of chest and limitation of motion due to fractured ribs; (b) Subcutaneous emphysema; (c) Hemothorax.
9. Abdomen- (a) Signs of peritoneal irritation from ruptured organs; (b) Abdominal masses from hematomas.
10. Central nervous system- (a) Lower motor neurone paralysis from spinal cord injury; (b) Upper motor neurone paralysis from intracranial injury (c) Neurologic signs varying with location and extent of injury.

THE FAMILY

History

1. Documented history of previous neglect and/or abuse of the patient or another child.
2. A confession of abuse occurs rarely; it may be for the purpose of protecting someone else, frequently a guilty family member.
3. Reports of witnessed abuse are not always reliable.

APPENDIX B

DETECTION OF BABIES AT HIGH RISK FOR NEGLECT

The following comments will concentrate on overt signs of inadequate parenting. Those high-risk factors can be uncovered without probing questions. Common sense and observations will do. (The silent side of this problem, namely, mothers who really do not like their babies but take adequate care of them anyway, will be ignored in this discussion.) The potential for neglect and abuse correlates better with the findings of a cluster of these signs than of an isolated factor. Most of these factors increase the risk for neglect. However, child abuse and child neglect may be a continuum. Although the majority of cases of child neglect will not evolve into physical abuse, presence of a father who is a known sociopath and any form of harsh discipline.

PRENATAL DATA- Parents' true feelings are less hidden during prenatal visits, and some high-risk factors are apparent even before the baby is born. (1) A mother denies the pregnancy; she may avoid prenatal care until late in the third trimester, present in labor or claim that she did not know she was pregnant. (2) A pregnant woman has sought or attempted abortion unsuccessfully. (3) A mother has agreed to relinquish her baby for adoption (but changes her mind after the child is born.) (4) "Nesting" behavior or home preparation for the forthcoming baby is present. (5) An unwed mother-to-be has recently been abandoned by her family or the baby's father. (6) A mother is drug-addicted or alcoholic and unable to take care of herself or a child. (7) A parent has injured a previous child or had a child temporarily removed because of neglect. (8) The father has a known criminal record for assault or a previous psychiatric diagnosis of sociopath.

DELIVERY ROOM OBSERVATIONS: - The delivery room affords a direct impression of a mother-baby interaction. Immediately after birth the nursing staff should be asked to record the following observations: (1) How does the mother look? (2) What does the mother say? (3) What does the mother do?

Smiling, elation, eye-to-eye contact, acceptance of the baby's sex and appearance and a positive response to his vigorous cry are all early signs of attachment.

NURSERY OBSERVATIONS - The following information can be noted in the newborn nursery by the physician or nurses on duty there. (1) Claiming behavior should be observed before the mother is discharged. It can be normal for a mother to feel that the baby is not hers for a few hours or days; however, if she does not accept the baby as "hers," as evidenced by naming him, wanting to hold him and wanting to feed him by 3 days of age, a serious delay in maternal attachment has occurred and requires evaluation. (2) The mother may consider the child a disappointment, as evidenced by her disparaging comments that he is "ugly," "diseased" or "defective." This situation is especially dangerous if, in truth, the child does not have any of these problems. Most mothers consider their normal newborn infant to be beautiful. (3) The high-risk mother may be revolted by the child's odor, drooling, regurgitation or stools. (4) Postpartum depression occurring on approximately the second or third day after delivery-manifested by crying, anxiety and confusion-may be a serious sign. Sometimes the depression is due to a rapid fall-off in maternal estrogen. More commonly it is due to the fact that the mother is overwhelmed by the demands placed upon her by the new baby, whom she has discovered she does not really want. (5) If the mother goes home before the baby is discharged and then reduces her visiting time, she may not have experienced maternal attachment. This is especially likely to happen to prematures who have a long stay in the hospital. A recent study revealed that visits of fewer than three times in a given 2-week period meant that problems were forthcoming. A reluctance on the part of the mother to take the baby home once he is ready is another reason for concern. (6) The mother who demonstrates her lack of impulse control by spanking the baby or becoming furious at him when he is barely 3 days old is extremely dangerous.

OFFICE OBSERVATIONS- Pediatricians have been assessing the following risk factors for many decades. (1) Some mothers do not pick up their babies while receiving medical care. They leave them lying almost unnoticed on the examining table. (2) Some mothers hold their babies like packages. They let their heads dangle without support or handle them roughly. They avoid body contact by holding them far out on their knee. (3) Some mothers rock their babies but the action is mechanical. They do not smile at them, make eye contact with them; talk to them, sing to them or cuddle them. (4) Some mothers return repeatedly to the physician for minor complaints that cannot be verified. Often such a mother will go to the local emergency room rather than to the office. Although she is complaining about the child's symptoms, she may be worrying about her ability to cope with him.

Stress Factors

1. Frequent pregnancies with several children of pre-school age.
2. Prematurity.
3. Out-of-wedlock pregnancies.
4. Physically or psychologically absent fathers.
5. Economic stress.
6. Retardation of responsible caretakers.
7. History of alcohol or drug abuse. (The above may or may not be balanced by adequate support systems)

Special Factors

1. Autocratic child care practices, using physical punishment as a disciplinary measure.
2. Unrealistic expectations for the child to develop regularity in eating and sleeping patterns, early toilet training and correct table manners.

(Check List as modified from Gregg, G.S.; Physician, Child Abuse Reporting Law, and Injured Child. Clin. Pediat., 7:720-725, 1968.)

TREATMENT OF CHILD ABUSE AND NEGLECT GUIDELINES FOR INITIAL MANAGEMENT

1. Hospitalize suspected case.
2. Treat child's injuries or malnutrition.
3. Obtain necessary laboratory tests.
4. Elicit detailed facts concerning injury.
5. Obtain consultation with child abuse specialist within 24 hours if diagnosis in doubt.
6. Tell parents the diagnosis and need to report it.
7. Examine all siblings within 12 hours.
8. Maintain helping approach to parents.
9. Involve the mother in child's hospital care.
10. Report to Child Protective Agency by phone within 24 hours.
11. Refer parents who need crisis psychotherapy.
12. Attend dispositional conference.
13. Provide expert medical testimony for cases going to court.
14. Provide follow-up of physical status.
15. Make sure that the Child Protective Agency is providing psychological follow-up and treatment.

CURRENT PROBLEMS IN PEDIATRICS

"The Pediatrician's Role in Child Abuse and Neglect" by Barton D. Schmitt and C. Henry Kempe, Vol. V, No. 5, March, 1975.

PHYSICAL FINDINGS- Certain physical findings reveal the value of the child to his mother. Hygiene neglect is manifested by an unwashed, smelly baby with long dirty fingernails. Cradle cap sometimes is indicative, but it may be due to unwarranted fear that one should not wash the baby's "soft spot." Uncontrolled diaper rash may result from infrequent diaper changes. If the hair is worn off the back of the head, the baby is probably lying in one position for extended periods of time.

PATTERN OF DISCIPLINE- The mother's comments regarding when and how she disciplines her child can tell a great deal about the child's risk for injuries in the name of discipline. (1) Some mothers talk about disciplining their baby at a very early age and make it very clear that they do not want a spoiled child. They often try to teach him things that are beyond his capacity before he is 1 year of age. (2) The child may be hit in the waiting room for almost everything he does. (3) The mother may be overheard to threaten her child with "your father will whip you when you get home." (4) The mother may mention the fact that she disciplines her child with a blunt instrument such as a paddle or a belt. (5) If the child states that "he doesn't even care if he is spanked," the discipline enforcement at home is probably out of control. (6) The child is at risk if he is considered very difficult as evidenced by being labeled "Mean," "bad" or "impossible." Some of these children are punished on a daily basis "just because they are bad" rather than because of any specific misbehavior.

HOMICIDAL THREATS- Incipient battering is implied if the mother states, "If someone doesn't do something, I'm going to hurt that child." Parents do not say things like this lightly. The mother is revealing that she is losing control. This is a psychiatric emergency-far from the mother who says, "Some days I could strangle him." When asked, "How close have you come to doing this?", she quickly responds that it is only a feeling she had and she could never strike her child. The true homicidal threat requires that the child be hospitalized for his protection and that the mother have immediate psychiatric help. She may readily agree to voluntary placement of the child in a foster home. A serious error is to tell a mother who wants to place her child to go home and try a new disciplinary approach. The baby may return dead.

CHILD ABUSE AND NEGLECT STATISTICS

10 cases of Abuse/1000 Live Births
38 Reports/100,000 Population/Year
760 Known Deaths/Year

1/3 of Cases Under 6 Months of Age
1/3 of Cases 6 Months-3 Years of Age
1/3 of Cases Over 3 Years of Age

CHILD ABUSE AND NEGLECT SPECTRUM

1. Physical abuse
2. Nutritional neglect (failure to thrive)
3. Drug abuse
4. Medical care neglect
5. Sexual abuse
6. Emotional abuse
7. Safety neglect

CHILDREN AT RISK

1. Males
2. Prematures
3. Adopted- Foster- Step
4. Chronic Illnesses
5. Fundamentalists
6. Military
7. Poor

CURRENT PROBLEMS IN PEDIATRICS

"The Pediatrician's Role in Child Abuse and Neglect" by Barton D. Schmitt and c. Henry Kempe, Vo. V, No. 5, March, 1975.

APPENDIX B

OVERHEADS

VITAL SIGNS FOR INFANTS & CHILDREN

Age	Weight <i>kg(lbs)</i>	Heart Rate	Resp Rate	B/P (Sys)
NB	3 (7)	100- 160	30-40	70-110
<i>6MO</i>	<i>7 (15)</i>	<i>90-150</i>	<i>24-36</i>	<i>70-110</i>
1yr	10 (22)	90-150	22-30	70-110
<i>3yr</i>	<i>15 (33)</i>	<i>80-120</i>	<i>20-26</i>	<i>80-120</i>
5yr	20 (44)	70-110	20-24	80-120
<i>10yr</i>	<i>30 (66)</i>	<i>60-90</i>	<i>16-20</i>	<i>90-120</i>
12yr	40 (88)	60-90	16-20	90-130
<i>14yr</i>	<i>50 (110)</i>	<i>60-90</i>	<i>14-20</i>	<i>90-140</i>

LEVEL OF RESPONSIVENESS

<i>Level</i>	Infant	Child
A – Alert	Curious Recognizes parents	Alert Aware of Surroundings
V – Responds to voice	Irritable, cries	Opens eyes
P – Responds to pain	Cries to pain	Withdraws
U – Unresponsive	No Response	No Response

GLASGOW COMA SCALE

Activity	Score	Infants (Best Response)	Children & Adults
EYE Opening	4	Spontaneous	Spontaneous
	3	To speech or sound	To speech
	2	To painful stimuli	To pain
	1	None	None
VERBAL	5	Appropriate words or sound; social smile;fixes and follows	Oriented
	4	Cries but consolable	Confused
	3	Persistently Irritable	Inappropriate words
	2	Restless Agitated	Incomprhensible sounds
	1	None	None
MOTOR	6	Spontaneous movement	Obeys commands
	5	Localizes to pain	Localizes to pain
	4	Withdraws to pain	Withdraws to pain
	3	Abnormal flexion (decorticate)	Abnormal flexion (decorticate)
	2	Abnormal flexion (decerebrate)	Abnormal flexion (decerebrate)
	1	None (flacid)	None (flacid)

PEDIATRIC TRAUMA SCORE

Points

<i>Components</i>	<i>+2</i>	<i>+1</i>	<i>-1</i>	<i>Score</i>
Weight	>20 kg (44lb)	10-20 kg (22-44lb)	<10 kg (<22lb)	
<i>Airway</i>	<i>Patent</i> *	<i>Maintainable</i> +	<i>Unmaintainable</i> -	
Systolic(cuff) BP (pulses)	>90mm Hg Radial	50-90mm Hg Carotid	<50mm Hg Nonpalpable	
CNS	Awake	LOCΔ	Unresponsive	
<i>Fractures</i>	<i>None</i>	<i>Closed or suspected</i>	<i>Multiple open Or closed</i>	
Wounds	None	Minorζ	Major Ω burns, Or penetrating	
TOTAL SCORE				-6 to +12 decreases with injury severity
Generally:	9-12 --- minor trauma 6-8 --- potentially life threatening 0-5 --- life threatening <0 --- usually fatal			
<p>* <i>No assistance required</i></p> <p>+ <i>Protected by patient, but requires continuous monitoring for changes consider use of NPA</i></p> <p>- <i>Requires airway adjuncts (OPA or ET) and suctioning</i></p> <p>Δ <i>Responds to voice, pain, or temporary loss of consciousness noted</i></p> <p>ζ <i>Abrasion, minor lacerations, burns < 10% not involving face, airway, hands, feet, or genitalia</i></p> <p>Ω <i>Penetrating, major avulsions, lacerations, burns > 10% or burns involving face, airway, hands, feet, or genitalia</i></p>				

Version 1

EQUIPMENT

Age & Weight Kg (lb)	Airway / Breathing				Circulation
	O ₂ Mask	Oral Airways	B-V-M	Suction	B/P Cuff
Premie 1-1.5 kg (2.2-3.3 lb)	Premie Newborn	Infant	Infant	6-8 Fr	Premie Newborn
Newborn 0-6 mos 3.5-7.5 kg (8-16.5 lb)	Newborn	Infant Small	Infant	8 Fr	Newborn Infant
6-12 mos 7.5-10 kg (16.5-22 lb)	Pediatric	Small	Pediatric	8-10 Fr	Infant Child
1-3 yrs 10-15 kg (22-33 lb)	Pediatric	Small	Pediatric	10 Fr	Child
4-7yrs 17.5-23 kg (39-51 lb)	Pediatric	Medium	Pediatric	14 Fr	Child
≥ 8 yrs ≥ 25 kg (≥ 55 lb)	Adult	Medium Large	Pediatric Adult	14 Fr	Child Adult

APPENDIX C

HANDOUTS

EQUIPMENT					
Age & Weight Kg (lb)	Airway / Breathing				Circulation
	o₂ Mask	Oral Airways	B-V-M	Suction	B/P Cuff
Premie 1-1.5 kg (2.2-3.3 lb)	Premie Newborn	Infant	Infant	6-8 Fr	Premie Newborn
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≥ 8 yrs ≥ 25 kg (≥ 55 lb)	Adult	Medium Large	Pediatric Adult	14 Fr	Child Adult

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PEDIATRIC TRAUMA SCORE				
Points				
Components	+2	+1	-1	Score
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CNS	Awake	LOCA	Unresponsive	
CNS	Awake	LOCA	Unresponsive	
Fractures	None	Closed or suspected	Multiple open Or closed	
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TOTAL SCORE				-6 to +12 decreases with injury severity
Generally: 9-12 --- minor trauma 6-8 --- potentially life threatening 0-5 --- life threatening <0 --- usually fatal				
* No assistance required + Protected by patient, but requires continuous monitoring for changes consider use of NPA - Requires airway adjuncts (OPA or ET)and suctioning Δ Responds to voice, pain , or temporary loss of consciousness noted ζ Abrasion, minor lacerations, burns <10% not involving face, airway, hands, feet, or genitalia Ω Penetrating major avulsions, lacerations, burns > 10% or burns involving face, airway, hands, feet, or genitalia				

Version 1.2.11.96

EQUIPMENT

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4-7yrs 17.5-23 kg (39-51 lb)	Pediatric	Medium	Pediatric	14 Fr	Child
≥ 8 yrs ≥ 25 kg (≥ 55 lb)	Adult	Medium Large	Pediatric Adult	14 Fr	Child Adult

APPENDIX D

SKILLSHEETS

EMT Skill:
Broselow Ped. Emergency Tape

Performance Objective

The examinee will demonstrate Proficiency in determining weight, sizes of equipment, and dosages of Medication for pediatric patients using the Broselow tape

Condition

The examinee will be asked to measure a stimulated patient with a Broselow tape. The patient will be placed supine. Necessary equipment will be adjacent to the patient

Equipment

Stimulated patient and Broselow tape

Performance Criteria

100% accuracy required on all items

Name: _____

Date: _____

Attempt:

1. Examiner: _____

Pass Fail

2. Examiner: _____

Pass Fail

Preparation	Yes	No	Comments	Yes	No	Comments
1. Place patient in supine position						
2. Remove tape from package and Unfold						
Procedure						
1. Place tape next to patient, ensuring that side A or multi color side is facing up						
2. Place red end of tape even with the top of the patient's head						
3. Place edge of one hand on the red End						
4. Starting from the head, run the edge of free hand down the tape						
5. Stop hand even with the heel of the foot (if child is larger than tape, stop here and use appropriate adult technique)						
6. Verbalize the color or letter block (on edge of tape) and weight range where your free hand has stopped						
7. Use color letter block to identify appropriate size equipment						

APPENDIX E

STUDENT OUTLINE

**Oklahoma
Prehospital Pediatric Supplement
for
Infants and Children Module
1995 DOT EMT-Basic Refresher Curriculum**

Student Outline

**Prehospital Pediatric Supplement
for
Infants and Children Module
1995 DOT EMT-Basic Refresher Curriculum**

Student Cognitive Objectives

1. Define Emergency Medical Services for Children (EMSC)
2. Discuss how an integrated EMSC system can affect patient outcome.
3. Identify methods / mechanisms of injury prevention for Infants and Children
4. Distinguish between physical, sexual, and emotional abuse
5. Describe the range of injuries seen in physically abused, sexually abused, emotionally abused, and neglected infants and children
6. Describe the procedures required by state law for reporting suspected child abuse.
7. List signs of distress in a child with congenital heart defect.
8. Describe the appropriate prehospital care of “Special Needs” infants and children.
9. Describe the use of the Pediatric Trauma Score (PTS).

Student Psychomotor Objective

1. Identify indications for airway management in the pediatric patient.
2. Demonstrate the correct sequence in airway management for pediatric patients with respiratory insufficiency/failure.
3. Demonstrate proficiency in sizing and placement of an oropharyngeal (OP) airway.
4. Demonstrate the correct technique for sizing and placement of a nasopharyngeal (NP) airway.
5. Demonstrate the correct technique in utilizing the “Broselow Pediatric Emergency Tape”.
6. Apply the Pediatric Trauma Score (PTS) in two (2) simulated scenario’s.

**INFANTS AND CHILDREN MODULE
1995 DOT EMT-Basic Refresher Curriculum**

Cognitive Objectives:

Objective # 1. Define Emergency Medical Services for Children (EMSC).

A. Definition:

B. History:

C. Management (National):

D. Management (Oklahoma):

E. National Resource Centers:

F. Oklahoma Resource Center:

G. Education and Training:

Objective # 2 Discuss how an integrated EMSC system can affect patient outcome.

A. Integrated EMSC Systems:

Affects on Patient Outcome:

Objective # 3. Identify methods / mechanisms of Injury Prevention for Infants and Children.

Methods / Mechanisms:

Objective # 4 Distinguish between physical, sexual, and emotional abuse and neglect.

OVERVIEW

Definition:

Abuse:

Neglect:

A. Description of the Problem:

**B. Psychosocial Contributors
to Child Abuse:**

Objective # 5. Describe the range of injuries seen in physically abused, sexually abused, emotionally abused, and neglected children.

A. Physical abuse:

Patterns of Physical Abuse:

Beatings:

Shaken Baby Syndrome:

B. Sexual Abuse:

Subtle Signs:

Overt Signs:

C. Emotional Abuse:

D. Neglect:

Objective # 6. Describe the procedures required by state law for reporting suspected child abuse.

I. REPORTING SUSPECTED ABUSE

A legal obligation exists to report suspected abuse. A report of suspected abuse is only a request for an investigation. If additional incidents of abuse occur after the initial report has been made, make another request for investigation. If transportation to the hospital is imminent, report suspicions to the hospital personnel. Notify the Department of Human Services county office or call the Child Abuse Hotline at 1-800-522-3511. This number is answered 24 hours a day. In OK County call (405) 841-0800.

A. Vital History Includes:

B. Documentation Guidelines:

C. Oklahoma State Law Handout:

II. REACTION OF THE EMS PROVIDERS

It is common for EMT's and paramedics to have strong emotional reactions to child abuse cases, such as anger, frustration, disbelief, and horror.

- 1. These feelings can get in the way of care.**
- 2. Remember you are the child's advocate.**
- 3. The best way to help the child is to remove them from the situation and take them to the hospital.**

Objective # 7: List signs of distress in a child with congenital heart defect.

A: Definition:

B: Assessment:

C: Management:

Objective # 8: Describe the appropriate prehospital care of "Special Needs" infants and children.

Children dependent on high-technology equipment.

Reasons why EMS is activated:

BLS Management:

Objective # 9: Describe the use of the Pediatric Trauma Score (PTS).

Overview:

PTS Components and Scoring:

1. SIZE:

2. AIRWAY:

3. SYSTOLIC BLOOD PRESSURE:

4. LOC/CENTRAL NERVOUS SYSTEM:

5. MUSKLOSKELETAL/FRACTURES

6. WOUNDS

APPENDIX F

EQUIPMENT LIST

OKLAHOMA EMERGENCY MEDICAL SERVICES FOR CHILDREN PROJECT

Pediatric Minimum Equipment List

FACT SHEET

The attached equipment list, prepared by the EMS-C Prehospital Care Task Force, was reviewed and approved by the Oklahoma State Department of Health, Emergency Medical Services Advisory Council on October 2, 1992. In December, 1992, the Commissioner of Health, approved this equipment recommendation. In 1993, this pediatric prehospital minimum equipment list, was added to the current EMS Rules and Regulations under Section 3:10; 640-3-23, Equipment for ground Transportation Vehicles, pending legislative approval.

Prehospital pediatric emergency equipment has not been a priority of prehospital care providers in the past. Our examination of the current requirements for the state of Oklahoma identified a lack of pediatric equipment. After examining other standards for pediatric prehospital care equipment the attached list was devised. Standards examined in the development of our list were:

- Los Angeles Pediatric Society
- California EMS-C Project
- National EMS for Children Projects Education Task Group
- Pediatric ALS Equipment Recommendations
- Maine EMS-C Pediatric Ambulance Equipment List
- Recommendations by the ACEP Policy Statement of October, 1991

The Oklahoma EMS-C Project recommended that the entire list be incorporated into the current EMS rules and regulations. Many of the items identified on the attached list are currently being carried as standard equipment by many EMS providers. It is our hope that these additions will assure that correct equipment is available to provide optimal services to pediatric patients. Those individuals responsible for using the equipment will be encouraged to seek and maintain an acceptable knowledge base for equipment use.

**OKALHOMA
EMERGENCY MEDICAL SERVICES FOR CHILDREN
PREHOSPITAL CARE TASK FORCE
PEDIATRIC PREHOSPITAL MINIMAL EQUIPMENT LIST**

The following items are identified as the required minimum equipment for prehospital pediatric care.

BASIC EQUIPMENT

AIRWAYS: NASAL

Nasopharyngeal airways: 12F, 14F, 16F, 20f, 24f

MASKS AND CANNULA

Simple and non re-breathing masks, infant and child
Pediatric nasal cannula (1)

SUCTION DEVICES

Large bore suction
Suction catheters (flexible and 6F-14F rigid)

BREATHING

Pulse oximeter (optional)
Ventilation equipment:
 1 bag valve mask unit, self inflating:
NS, D5 ½
 250, 1000 cc bags, without pop off
 valves, infant and child sizes (1 each)
Oxygen Masks: clear disposable:
 neonate, infant, child (1 each)
Ability to deliver 100% oxygen

CIRCULATION

Newborn infant/child BP kit
MAST-pediatric size (optional, for splinting)

DISABILITY AND IMMOBILIZATION

Pediatric traction splint (optional)
Splinting materials of choice to include pediatric
 sizes
Head and body immobilization system to allow
 for neutral positioning

CERVICAL AND SPINE

Rigid pediatric cervical collars (3 pediatric
 sizes, 2 each)

BASIC MISCELLANEOUS

Pediatric trauma score reference
Glasgow Coma Scale Reference
Pediatric resuscitation measuring tape (Broselow)
Number of Poison Control
Approved child restraint device
Chem strips (optional)

INTERMEDIATE EQUIPMENT

ENDOTRACHEAL TUBES

Uncuffed 2.5, 3.0, 4.0, 5.0, 5.5, & 6.0 (2 each)

STYLETS

Stylets for endotracheal tubes:
Infant Child (2)

LARYNGOSCOPE SET AND BLADES

Straight: No. 0 (premature), No. 1 (infant),
 No. 2 (child)

Curved: No. 3 (medium adult)

INTRAVENOUS MATERIALS

Jelco or angiocaths catheters: 16, 18, 20, 22,
 25 Gauge (4 each)
I.V. fluids per medical controls suggest RL,

Tourniquets

Tape

Armboards - Infant and Child

Alcohol and betadine

Macro IV tubing 15 gtt/ml, 60 gtt/ml tubing

Volume limiting infusion set i.e., Burretrol or IV pump

ALTERNATIVE VASCULAR ACCESS

50cc syringe, syringe tip

 Intraosseous needles: 16, 18 gauge

Tuberculin syringes: 1cc: (rectal administration of
 anti-convulsant medication)

INTERMEDIATE MISCELLANEOUS

Pediatric drug dosage references

Chem strips

PARAMEDIC

MONITORING

Cardiac monitor defibrillator with pediatric paddles

Pediatric monitor electrodes

Defibrillator/monitor electrodes: (if hands off option
 available with equipment)

Pediatric Cricothyrotomy Kit (optional)

Nebulizer (optional)

