

***OKLAHOMA
PREHOSPITAL PEDIATRIC SUPPLEMENT
FOR
INFANTS AND CHILDREN MODULE
1994 EMT-BASIC CURRICULUM
STUDENT OUTLINE***



April 1996
EMSCRC #002

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STUDENT OUTLINE**

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**Oklahoma
Prehospital Pediatric Supplement
for
Infants and Children Module
1994 DOT EMT-Basic**

Student Cognitive Objectives

Objective Number Content

6-1.0	Define Emergency Medical Services for Children (EMSC)
6-1.0A	Discuss how an integrated EMSC system can affect patient outcome.
6-1.0B	Identify methods / mechanisms of injury prevention for Infants and Children.
6-1.2A	Identify two anatomic and physiologic differences between children and adults regarding skin and body surface.
6-1.3A	Identify four areas to consider when taking the child's history.
6-1.3B	Describe important factors in taking and interpreting vital signs. * Pulse * Respirations * Blood Pressure * Temperature
6-1.3C	Identify a minimum of four significant differences between the adult and pediatric airway, which affect ventilation.
6-1.5A	Evaluate the signs of respiratory insufficiency/failure in pediatric patients.
6-1.7A	Describe the four most common respiratory emergencies in children, the signs and symptoms, and management.
6-1.8A	Differentiate among mild, moderate, and severe dehydration.
6-1.11A	Describe the management of Infants and Children with Altered Thermal Regulation of the body.
6-1.13A	List the most common causes of trauma to the child and most frequent injuries to the child with multiple traumas.
6-1.14A	Describe the steps of the Initial Assessment-Trauma patient.
6-1.14B	Describe the Focused assessment of the pediatric trauma patient.

6-1.14C	Describe the signs and symptoms that indicate hypoperfusion (shock) in the child.
6-1.14D	List the characteristics of head injury with varying severity.
6-1.14E	Identify the early signs of increased intracranial pressure.
6-1.14F	Describe the assessment and management of a child with a suspected spinal cord injury
6-1.15A	Describe physical, sexual, psychological maltreatment and neglect.
6-1.15B	Describe the range of injuries seen in physical abuse, sexual abuse, psychological maltreatment and neglect.
6-1.15C	Describe the legal requirement for reporting suspected child abuse
6-1.ME-A	Describe the field management for meningitis and sepsis, including special precautions for both patient and field provider.
6-1.ME-B	Describe the assessment and management for diabetic ketoacidosis (hyperglycemia) and hypoglycemia.
6-1.ME-C	List signs of distress in a child with congenital heart defect.
6-1.ME-D	Describe the appropriate Prehospital care of “special needs” infants and children.

Student Psychomotor Objectives

<u>Objective Number</u>	<u>Content</u>
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6-1.27	Identify indications for airway management in the pediatric patient.
6-1.27A	Demonstrate the correct sequence in airway management for pediatric patients with respiratory insufficiency/failure.
6-1.27B	Demonstrate proficiency in sizing and placement of an oropharyngeal (OP) airway.
6-1.27C	Demonstrate the correct technique for sizing and placement of a nasopharyngeal (NP) airway.
6-1.27D	Demonstrate the correct technique in utilizing the “Broselow Pediatric Emergency Tape”.

PREHOSPITAL PEDIATRIC SUPPLEMENT INFANTS AND CHILDREN MODULE

1994 DOT EMT-Basic

Objective # 6-1.0 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 # 6-1.0A Discuss how an integrated EMSC system can affect patient outcome.

A. Integrated EMSC Systems:

B. Affects on Patient Outcome:

Objective # 6-1.0B Identify methods/mechanisms of Injury Prevention for Infants and Children.

Methods / Mechanisms:

Objective # 6-1.2A Identify two (2) anatomic and physiologic differences between children and adults regarding skin and body surface.

Skin and Body Surface Area:

Objective # 6-1.3A Identify four areas to consider when taking the child's history.

SPECIAL CONSIDERATIONS IN APPROACHING THE CHILD:

A. Taking the Child's History:

B. Enhancing Cooperation of the Child Without a Life Threatening Condition:

C. General Guidelines for the Exam:

Objective # 6-1.3B Describe the important factors in taking and interpreting vital signs.

- * Pulse
- * Respiration
- * Blood Pressure
- * Temperature

Vital signs in the pediatric patient are age dependent (see table). Poorly taken vital signs in the pediatric patient are of less value than no vital signs.

TABLE 1:

VITAL SIGNS FOR INFANTS & CHILDREN			
Weight	Heart	Resp.	BP

Age	kg	Rate	Rate	(Sys)
6 mo	7	90-150	24-36	70-110
3 yr.	15	80-120	20-26	80-120
10 yr.	30	60-90	16-20	90-120
14 yr.	50	60-90	14-20	90-140

A. Pulse: (see table)

B. Respiration's: (see table)

C. Blood Pressure: (see table)

D. Temperature:

E. Pulse Oximetry:

Objective # 6-1.3C Identify a minimum of four significant differences between the adult and pediatric airway which affect ventilation.

Differences Between Adult and Pediatric Airways:

Objective # 6-1.5A Evaluate the signs of respiratory insufficiency/failure in pediatric patients.

A. Definition:

B. Early signs and symptoms:

C. Late signs:

D. Factors predisposing pediatric patients to respiratory insufficiency/failure:

Objective # 6-1.7A Describe the four most common respiratory emergencies in children, the signs and symptoms, and management.

I. EMERGENCY RESPIRATORY CONDITIONS

Overview:

II. ASTHMA

A. Assessment:

B. Historical Data:

C. Management:

III. BRONCHIOLITIS

A. Assessment:

B. Management:

IV. CROUP

A. Assessment:

B. Historical Data:

C. Management:

V. EPIGLOTTITIS

A. Assessment:

B. Historical Data:

C. Management:

Objective # 6-1.8A Differentiate among mild, moderate, and severe dehydration.

DEHYDRATION

A. Definition:

B. Assessment:

C. Management:

Objective # 6-1.11A Describe the management of Infants and Children with Altered Thermal Regulation of the body.

ALTERED TEMPERATURE CONTROL

A. Fever and Hyperthermia:

B. Hypothermia:

Objective # 6-1.13A List the most common causes of trauma to the child and most frequent injuries to the child with multiple trauma.

PROFILE OF THE INJURED CHILD:

Etiology:

Objective # 6-1.14A Describe the steps of the Initial Assessment-Trauma patient.

INITIAL ASSESSMENT - TRAUMA PRIORITIES:

A. Initial Assessment-Trauma:

B. Airway Assessment with Control of the C-Spine:

C. Breathing:

D. Circulation:

E. Disability (Level of Consciousness):

F. Exposure:

G. Points to Remember:

Objective #6-1.14B Describe the Focused assessment of the pediatric trauma patient.

FOCUSED TRAUMA ASSESSMENT

A. Focused Trauma Assessment Guidelines:

B. Essential Components of the Focused Trauma Assessment:

Objective # 6-1.14C Describe the signs and symptoms that indicate hypoperfusion (shock) in the child

SHOCK OCCURS WHEN THE CARDIOVASCULAR SYSTEM FAILS TO MAINTAIN BLOOD FLOW TO ORGANS EITHER BY DEFICIENCY IN BLOOD VOLUME OR AN EXPANDED CAPACITY OF THE VASCULAR SYSTEM.

A. History:

B. Signs and Symptoms:

Objective # 6-1.14D List the characteristics of head injury with varying severity.

HEAD INJURIES

A. Etiology:

B. Anatomy and Physiology:

C. Types of Head Injury:

Objective # 6-1.14E Identify the early signs of increased intracranial pressure.

A. Early Signs of ICP:

B. Late Signs of Increased:

Objective # 6-1.14F Describe the assessment and management of a child with a suspected spinal cord injury.

SPINAL CORD INJURY

A. Etiology:

B. Anatomy and Physiology:

C. Types of Injury:

Objective # 6-1.15A Describe physical, sexual, and psychological maltreatment and neglect.

OVERVIEW

Definition:

Abuse:

Neglect:

A. Description of the Problem:

B. Psychosocial Contributors to Child Abuse:

Objective # 6-1.15B Describe the range of injuries seen in physical abuse, sexual abuse, psychological maltreatment and neglect and neglect.

A. Physical abuse:

B. Sexual Abuse:

C. Emotional Abuse:

D. Neglect:

Objective # 6-1.15C Describe the legal requirement for reporting suspected child abuse.

I. REPORTING SUSPECTED ABUSE

A legal obligation by statute exist for any person to report suspicion of abuse. A report of suspected abuse is confidential and 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, local law enforcement, or call the Child Abuse Hotline at 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 emotions can get in the way of care, and require self-restraint.**
- 2. Remember you are the child's safety advocate.**
- 3. The best way to help the child is to remove them from the situation and take them to the hospital. Successful accomplishment of this requires that a nonconcerted display of nonjudgmental neutrality be given.**

Objective # 6-1.ME-A Describe the field management for meningitis and sepsis, including special precautions for both patient and field provider.

I. SEIZURES

A. Definition:

B. Assessment:

C. Management:

II. MENINGITIS

A. Definition:

B. Etiology:

C. Assessment:

D. Management:

III. SEPSIS AND SEPTIC SHOCK

A. Definition:

B. Assessment:

C. Management:

Objective # 6-1.ME-B Describe the physical signs and field management for diabetic ketoacidosis (hyperglycemia) and hypoglycemia.

I. DIABETIC KETOACIDOSIS AND HYPERGLYCEMIA

A. Definitions:

B. Assessment:

C. Management:

II. HYPOGLYCEMIA

A. Definition:

B. Assessment:

C. Management:

Objective # 6-1.ME-C List signs of stress in a child with congenital heart defect.

CONGENITAL HEART DISEASE

A. Definition:

B. Assessment:

C. Management:

Objective # 6-1.ME-D 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 that cause fatigue from feeding.
5. Equipment found in the home includes:
 - a. Ventilators, suction equipment, O₂.
 - b. IV infusion pumps, feeding pumps.

A. Reasons Why EMS is Activated:

B. Management: