LEARNING OBJECTIVES FOR PEDIATRIC CLERKSHIP
(Unabridged web-version)

Definition of terms used in the document:

Rationale: This section outlines the reasons that a specific topic or clinical issue is included in the curriculum.

Prerequisites: Knowledge of the material in this section is assumed. A student should have acquired the knowledge and developed the skills and attitudes listed in this section before the beginning of the pediatric clerkship

Competencies: The knowledge, skills, or attitudes that students should be able to demonstrate.

Universal (U): a skill, attitude, or behavior not specific to pediatrics that is essential to all aspects of clinical medicine

Core Pediatric (CP): a skill, attitude, or behavior specific to pediatrics and expected of students by the end of the clerkship experience

Mastery (M): a skill, attitude, or behavior specific to pediatrics that is expected of students with advanced training in pediatrics not necessarily during the clerkship experience.

Processes: the types of patients, real or simulated, that a student should see during the clerkship experience

I. PROFESSIONAL CONDUCT AND ATTITUDES

Rationale

Knowledge, skills, clinical reasoning, and informed decision making while crucial to a physician's practice of medicine, are insufficient to guarantee successful clinical interactions. A physician must have well-developed interpersonal skills that facilitate communication, and must also demonstrate attitudes, behaviors and beliefs that serve to promote the patient's best interest. Students can learn to be professional, at least to a certain degree, in the abstract, but will acquire professional characteristics most effectively through contact with physicians chosen to serve as role models. In order to be effective role models, however, faculty must undergo training in order to be able to explain their behaviors explicitly, to foster professionalism and humanism. Clerkship Directors should assure that faculty development occurs in this area. Ethical principles, likewise, while learned in the abstract, must be applied clinically; the importance of suitable role models cannot be overemphasized.

In particular, each student must recognize that pediatrics poses unique challenges to professional conduct and attitudes. The patient constantly changes as growth and development proceed. The patient's ability to participate actively in the clinical interaction progresses, as does his or her knowledge, experience and concerns. The adolescent presents specific challenges, including such issues as privacy, risk-taking behaviors, confidentiality and personal involvement with health. The role of parents in the clinical interaction, and their knowledge, experience, and concerns also develop and change as an individual child grows and as subsequent children are born. The way a physician communicates can have a lasting effect in how parents, children and adolescents handle situations and interact with the physician.

Cultural, ethnic and socioeconomic factors also affect personal and family traits and behaviors, with varying effects on child rearing practices. Recognition of and respect for difference are important, yet the student must be alert for the child or adolescent at risk in different family environments, given that the physician's primary obligation is to promote the best interest of the patient.

Professional conduct extends to the educational process: Students have a personal responsibility for their own education and for development of life-long learning skills. They must interact with all staff, including their peers and their teachers, in a manner that demonstrates respect for each individual and that promotes personal and group learning.

Prerequisites

Well-developed data gathering skills, knowledge of ethical principles, and a basic understanding of health law issues are essential foundations for the student. Students should have completed an introductory course on medical ethics providing a basic understanding of ethical principles (autonomy, beneficence, nonmaleficence, and justice) and their application in clinical medicine

Competencies

A. Humanism and Professionalism in Patient and Family Encounters:

Knowledge

1. Describe and demonstrate behaviors that respect the patient's modesty, privacy, and confidentiality. (U)
2. Describe the practical applications of the major ethical principles (i.e. justice, beneficence, non-malfeasance and respect for autonomy) (U)

Skills

1. Demonstrate communication skills with patients and families that convey respect, integrity, flexibility, sensitivity, and compassion. (U)
2. Demonstrate respect for patient, parent, and family attitudes, behaviors and lifestyles, paying particular attention to cultural, ethnic, and socioeconomic influences to include actively seeking to elicit and incorporate the patient's, parent's and family's attitudes into the health care plan. (U)
3. Demonstrate behaviors and attitudes that promote the best interest of patients and families, including showing flexibility to meet the needs of the patient and family. (U)

B. Professionalism with Members of the Health Care Team

Knowledge

1. Describe the characteristics of the impaired physician and reflect on your responsibilities to identify and report concerning behavior (M)

Skills
1. Demonstrate collegiality and respect for all members of the health care team. (U)

C. Professionalism in the Learner Role
Skills
1. Demonstrate a positive attitude and regard for education by demonstrating intellectual curiosity, initiative, honesty, responsibility, dedication to being prepared, maturity in soliciting, accepting, and acting on feedback, flexibility when differences of opinion arise, and reliability (including completing all assignments with honesty). (U)
2. Identify and explore personal strengths, weaknesses, and goals – in general and within specific patient encounters. (U)
3. Describe the impact of stress, fatigue, and personality differences on learning and performance. (U)

D. Professionalism and Society
Knowledge
1. Describe a pediatrician's role and responsibility in advocating for the needs of patients (individual and populations) within society. (M)

Skills
1. Demonstrate behaviors that enhance the experience of the entire group of learners. (M)

II. SKILLS

Rationale

An essential skill for success as a clinician and lifelong learner is clinical problem solving. The process of going from a patient's chief complaint to the creation of an appropriate differential diagnosis and the formulation of a diagnostic therapeutic plan is the core of clinical medicine. Skills essential for competent medical care include the ability to conduct an interview, perform a physical examination, manage medical data, communicate written and oral information, integrate basic science knowledge, search and read the literature critically, and teach. The care of individual patients requires the application of all of these skills.

Prerequisites

- Introductory course in physical diagnosis which includes general physical examination techniques and the use of diagnostic instruments.
- Basic competency in patient interviewing to include an understanding of different styles of questions used in the medical review, such as open-ended, directed, follow-up, and summary questions.
- Awareness of the affects of personal and cultural differences in the provision of care.

General Competencies (all skills are CP unless specifically designated U or M)

1. Demonstrate sensitivity to confidentiality, privacy, and modesty, during the medical interview and physical examination (U) (see professionalism)
2. Demonstrate an ability to perform an age-appropriate history and physical examination in children of all ages (CP)

Specific Skills:

A. Interviewing Skills

1. Demonstrate an ability to obtain the following information in an age-appropriate and sensitive manner from a child and or the accompanying adult: (CP)

<u>History of the Major Active Problem (U)</u>

1. Presenting problem
2. Describe onset of the symptom or problem, and give chronological account of events since that time
3. Complete description of each symptom (PPQRST)
4. Pertinent positives or negatives related to diagnostic hypotheses and/or ROS.
5. If a chronic problem, is this episode any different
6. System review of affected area
7. Fluid intake-output: Fever, vomiting, diarrhea
8. Summarize data. Open ended questions, "Is there anything else?"
9. Concern of parent or child regarding illness or effect of illness on family
10. If patient has specific concern – inquire regarding basis of the concern.

Transition Statement to Past Medical History

<u>Past Medical History (U)</u>

1. Other medical problems in the past: Time-line developed in complex cases. Problem, treatment, resolution.
2. Childhood illness
3. Allergies: Pollen, drugs, food. What happened? Treatment and resolution
4. Accidents or injuries
5. Hospitalizations, Reaction of parent and child to these events
6. Surgical procedures, Reaction of parent and child to these events
7. Medications – including vitamins

Transition Statement to Pregnancy

<u>Pregnancy (CP)</u>

1. Was this pregnancy planned and was it desired?
2. Prenatal care: When first seen, frequency of visits during pregnancy.

3. Affect of pregnancy upon the mother and family.
4. Any physical problems during pregnancy (detailed in children under 2 ½ years).
   - any accidents or injuries during pregnancy
   - drugs taken during pregnancy
   - total weight gain
   - any exposure to infectious diseases
   - high blood pressure
   - bleeding
   - rashes
   - fever
   - x-rays
5. Labor: duration, complications, and anesthesia.
6. Delivery: vaginal, cesarean section.
7. Gestational age and birth weight.
8. Neonatal period: concerns, special care, when baby went home.
9. Bonding interaction with infant.
10. Adjustment to newborn for family (parents and siblings).

Transition Statement to Health Maintenance

Health Maintenance (CP)

1. Source of Primary Care Provider
2. Immunization (including tuberculin tests). Ask mother to bring in record.
3. Age appropriate nutritional assessment.
   - quantity
   - quality
   - milk intake
   - infant: breast or bottle
4. Age appropriate safety measures (car seat, seat belts, diet, exercise, sleep, guns, smoking, smoke detectors, water temperature, sexual activity, and alcohol).

Transition Statement to Growth and Development

Growth and Development (CP)

1. Here and now development, i.e., school progress, sports, games, few landmarks in early development (more detailed early development for young child).
2. Any concerns about either growth or development? If yes, details of early development.
3. Behavioral problems, habits (e.g., temper tantrums, thumb sucking).
4. Description of child, e.g., "How would you describe Johnny?"
5. Relationship of child to other parent, siblings and other children.
6. Discipline: How parents, play activities, exercise, television viewing.
7. Bowel and bladder training if appropriate for age of child.
8. Adolescents:
   H-Home environment, perception of their health, menstrual history.
   E-Education & goals
   A-Activities: school, community, church.
   D-Drugs, alcohol, cigarettes.
   S-Sexuality.

Transition Statement to Family History

Family History (U)

1. Mother's age and health (family planning or birth control included here).
2. Father's age and health.

3. Sibling's ages and health.
4. Maternal grandparents.
5. Paternal grandparents.
6. Risk diseases in family:

≺ Allergies	≺ Cancer	≺ Heart disease
≺ Asthma	≺ Diabetes	≺ Hypertension
≺ Birth defects	≺ Epilepsy	≺ Mental Illness
≺ Bleeding disorders	≺ HIV	≺ Tuberculosis

Transition Statement to Social History and Patient Profile

Social History and Patient Profile (CP)

1. Married, single, divorced, widowed: Family support system.
2. Employment.
3. Housing and sleeping arrangements.
4. Finances, i.e., adequate to meet family needs and medical care.
5. Medical insurance.
6. Religious, cultural, language, and other belief systems.
7. Alcohol and/or drug abuse

Transition Statement to Review of Systems

Review of Systems (CP)

1. Skin: rashes, hives, bruises, changes in texture or color, itching.
2. Eyes: eye infections, drainage, redness, eyes more together, excessive tearing, eye examinations.
3. Ears, Nose, Throat: ear infection, drainage, hearing problems, hearing tests, nose bleeds, nasal discharge, frequent colds, sore throat, streptococcal infections.
4. Lymphatic: lumps in neck, "swollen glands".
5. Dental: eruption of teeth, bleeding gums, carries preventative care.
6. Cardiac: murmurs, chest pain, blueness of lips or fingernails, activity level, tires easily.
   Respiratory: cough, wheezing, chest pain, blueness of lips or fingernails, activity level, tires easily.
7. Gastrointestinal: vomiting, diarrhea, constipation, pain, jaundice, bowel training.
8. Genitourinary: pain, frequency, burning, blood, good stream, bladder training, bed-wetting.
9. Central Nervous System: headache, dizziness, weakness, tingling, numbness, seizures or convulsions, problems with coordination.
10. Musculo-skeletal: pain in bones or joints, redness, swelling, limitation of movement, muscle cramping.
11. Endocrine: growth pattern, excessive thirst, unusual weight gain or weight loss, unusual sensitivity to heat or cold.
12. General: weakness, fatigue, fever, milestones.
13. Immunologic/Infectious: frequent infections, frequent fevers, antibiotic use.

"Is there anything else you would like to discuss or any questions regarding other concerns you may have?"

B. Physical Examination Skills
1. Demonstrate the role of patient observation in determining the nature of a child's illness and developmental stage (CP)
2. Conduct a pediatric physical examination appropriate to the nature of the visit or complaint (complete vs. focused) (U) and the age of the patient (CP)
3. Demonstrate an ability to perform the following examination skills (CP)

Appearance

- Interpret the general appearance of the child, including size, morphologic features, development, behaviors and interaction of the child with the parent and examiner.

- Identify signs of acute and chronic illness in a neonate, infant, toddler, school aged child, and adolescents as evidenced by skin color, respiration, hydration, mental status, cry and social interaction.

Vital signs

- Measure vital signs, demonstrating knowledge of the appropriate blood pressure cuff size and normal variation in temperature depending on the route of measurement (oral, rectal, axillary or tympanic)
- Identify variations in vital signs based on age of the patient, the presence or absence of disease, and testing modalities (e.g. blood pressure cuff size).

Growth (See section on Growth)

- Accurately graph and interpret height (length), weight, and head circumference
- Calculate, plot, and interpret BMI (U)
- Describe the usefulness of longitudinal data in assessing growth

Development (See section on Development)

- Accurately identify and interpret major developmental milestones of the neonate, infant, toddler, school-aged child, and adolescent.

HEENT

- Observe, measure, and describe head size and shape, symmetry, facial features, and ear position as part of the examination for dysmorphic features
- Identify sutures and fontanels in neonates and interpret the findings.
- Identify the red reflex and discuss how it is used to detect corneal opacities and intraocular masses.
- Detect the corneal light reflection and discuss how it is used to identify strabismus
- Assess hydration of the mucous membranes.
- Assess dentition (U)
- Observe the tympanic membrane using an otoscope and an insufflator
- Identify the structures of the oropharynx (e.g. uvula, tonsils, palate, tongue) and recognize signs of pathology (U)

Neck

- Palpate lymph nodes and describe what anatomic areas they drain (U)
- Demonstrate maneuvers that test for nuchal rigidity
- Palpate the thyroid and any neck masses (U)

Chest

- Observe, measure and interpret the rate, pattern and effort of breathing (U)
- Identify normal variations of respiration and signs of respiratory distress e.g. grunting, flaring, and retraction (U)
- Identify normal breath sounds and findings consistent with respiratory pathology such as stridor, wheezing, crackles and asymmetric breath sounds (U)
- Identify transmitted upper airway sounds (U)
- Observe and describe breast tissue according to developmental stage (e.g. Tanner scale) (CP) and palpate breast tissue (M)

Cardiovascular

- Identify the pulses in the upper and lower extremities through palpation.
- Observe and palpate precordial activity (U).
- Describe cardiac rhythm, rate, and quality (such as intensity, pitch, and location) of the heart sounds and murmurs and variation with maneuvers through auscultation. (U)
- Assess peripheral perfusion, using a test for capillary refill. (U)
- Identify central versus peripheral cyanosis

Abdomen

- Palpate the liver, spleen and kidneys, and interpret the finding based on the age of the patient.
- Assess the abdomen for distention, tenderness, and masses through observation, auscultation, and palpation (U)
- Determine the need for a rectal examination, (CP) and demonstrate the age-appropriate technique (M).

Genitalia

- Describe the difference in appearance of male and female genitalia at different ages and developmental (e.g. Tanner) stages.
- Palpate the testes (CP) and identify genital abnormalities in males, including cryptorchidism (CP), hypospadias, phimosis, hernia, hydrocele and testicular mass (M).
- Recognize genital abnormalities in females including signs of virilization (CP) imperforate hymen, labial adhesions and signs of injury.(M)

Extremities

- Examine the hips of a newborn for developmental dysplasia of the hip using the Ortolani and Barlow maneuvers
- Observe and describe the gait of children at different ages.
- Identify age-related variations in the examination of the extremities, such as tibial torsion, genu valgus, flat feet, etc. (M)
- Recognize pathology, such as joint effusions, signs of trauma, and inflammation(CP) and restricted or excessive joint mobility (M)

Back

- Perform and interpret a screening test for scoliosis.
- Examine the back for midline tufts of hair, pits, sacral dimples, or masses.

Neurologic examination

- Elicit the primitive reflexes that are present at birth and describe how they change as the child develops.
- Assess the quality and symmetry of tone, strength and reflexes, using age-appropriate techniques. (M)
- Assess the major developmental milestones of newborns, infants, toddlers, school aged, children, and adolescents.

Skin

- Describe and assess turgor, perfusion, color, hypo and hyperpigmented lesions, and rashes through observation and palpation (U)

- Identify jaundice, petechiae, purpura, bruising, vesicles, and urticaria. (U)

For additional information on Physical Examination, please refer to physical diagnosis manual such as Bates.

C. Patient Communication Skills
1. Conduct an effective interview by adapting the interview to the visit (e.g., first visit, acute care, health supervision), or chief complaint, (U)
2. Demonstrate effective verbal and non-verbal communications skills with children and their parents or families that include:
   - Establishment of rapport taking into account the patient's age and development stage (CP)
   - Use of communication techniques that enable development of a therapeutic alliance being sensitive to the unique social condition and cultural background of the family (U)
   - Identification of the primary concerns of the patient and/or family (U).
   - Discussion of medical information in terms understandable to patients and families avoidance of medical jargon (U)

3. Correctly identify the need for an interpreter in specific patient-physician interactions. (U)
4. Effectively communicate information about the diagnosis, diagnostic plan, and treatment to the patient and family and assess the patient and families understanding (M).
5. Describe the important role of patient education in treatment of acute and chronic illness, and prevention of disease. (M)
6. Observe and reflect on the communication of "bad news" to parents, children and adolescents. (M)

D. Peer Communication Skills
1. Demonstrate effective oral and written communication with the health care team avoiding jargon and vague terms (e.g. clear and normal). (U).
2. Present a complete, well-organized verbal summary of the patient's history and physical examination findings, including an assessment and plan modifying the presentation to fit the time constraints and educational goals of the situation. U
3. Document the history, physical examination, and assessment and plan using a format appropriate to the clinical situation (e.g., inpatient admission, progress note, office or clinic visit, acute illness, health supervision visit, and interval care visits). (U)
4. Write admission and daily orders for a hospitalized patient (U)
5. Write a prescription (see Therapeutics section) (U) specific for a child's weight (CP)

E. Problem solving skills
1. Demonstrate an ability to generate an age-appropriate differential diagnosis and problem list based on the interview and physical examination. (CP)
2. Outline a diagnostic plan based on the differential diagnosis, and justify the diagnostic tests and procedures taking into account the test's sensitivity, specificity, and predictive value, as well as its invasiveness, risks, benefits, limitations, and costs. (MU)
3. Interpret the results of diagnostic tests or procedures, recognizing the age-appropriate values for commonly used laboratory tests, such as the CBC, urinalysis, and serum electrolytes. (M)
4. Formulate a therapeutic plan appropriate to the working diagnosis (MU)
5. Formulate an educational plan to inform the health care team and family of your thought process and decisions. (MU)
6. Search for relevant information using electronic (or other) data bases and critically appraise the information obtained to make evidence based decisions. (U)

III. HEALTH SUPERVISION

Rationale

Health supervision which includes assessment of growth and development, prevention of disease by immunization, prevention of injury by education, screening for treatable conditions and promotion of a healthy environment and a healthy lifestyle is essential to pediatric practice and primary care.

Prerequisites

- Introductory data gathering skills.
- Knowledge of metabolic processes in the body including the respective roles of dietary fats, carbohydrates, and protein, and the need for vitamins and minerals
- Knowledge of normal immune responses, mechanisms of immunization, and modes of transmission of communicable diseases.
- Knowledge of clinical epidemiologic concepts and the appropriate uses of screening in clinical medicine and the characteristics of a good screening test (i.e. sensitivity, specificity, positive and negative predictive values).

Competencies

Knowledge

1. List the most common preventable morbidities in childhood and describe strategies for prevention. (CP)
2. Describe the components of a health supervision visit including health promotion and disease and injury prevention, the appropriate use of screening tools, and immunizations for newborns, infants, toddlers, school aged children, and adolescents. (CP)
3. Describe the rationale for childhood immunizations. (See Prevention). (CP)
4. Discuss the rational for screening tests (such as environmental lead questionnaire, domestic violence screening, CBC, urinalysis, blood lead level, and PPD). (CP)
5. Describe the indications (CP), appropriate use (CP), interpretation (M), and limitations (M) of the following screening tests:
    - Neonatal screening
    - Developmental screening
    - Hearing and vision screening
    - Lead screening
    - Anemia screening
    - Tuberculosis testing
6. Define anticipatory guidance and describe how it changes based on the age of the child. (CP)

Skills.

1. Demonstrate an ability to provide age-appropriate anticipatory guidance about nutrition (CP), behavior (CP), immunizations (CP), injury prevention (CP), pubertal development (CP), sexuality (M), and substance use and abuse (M).

Processes

All students should see during the course of the Pediatric Clerkship should see an infant, toddler, school aged, and adolescent child for a health care supervision visit.

IV. GROWTH

Rationale
Growth is a defining feature of childhood. Genetic and environmental factors influence the rate of growth and the final stature and body habitus the child attains. Regular monitoring of growth provides the clinician with one of the best indicators of the underlying health of the child.

Prerequisites
Knowledge of the genetic, endocrine, nutritional, and psychosocial influences on growth.

Competencies
Knowledge
1. Describe variants of normal growth in healthy children, (e.g. familial short stature and constitutional delay). (CP)
2. Identify and describe abnormal growth patterns based on the family growth history and the child's previous growth e.g. microcephaly, macrocephaly, short stature, obesity, growth abnormalities related to specific physical findings. (CP)
3. Identify failure to thrive and overweight/obesity in a child or adolescent using BMI and other growth measures and outline the differential diagnosis and initial evaluation. (CP)

Skills
1. Demonstrate ability to measure and assess growth including height/length, weight, and head circumference and body mass index in patient encounters using standard growth charts. (CP)

Processes:
All students on the Pediatric Clerkship should see a patient with a patient with real or possible (e. g. parental concern) issues related to growth (e.g. failure to thrive, obesity, short stature, macrocephaly, microcephaly, constitutional delay, small for gestation age). This can be in the context of a well child examination or a child with a known disorder.

V. DEVELOPMENT

Rationale

The physical maturation and intellectual, social and motor development of the child follow predictable patterns, and provide the physician with a good indicator of the child's health and neurological function. The clinician must be familiar with normal patterns of development in order to detect deviations that might be the first sign of a medical or psychosocial problem.

Prerequisites

Preclinical coursework in the scientific underpinning of neurology and neurobiologic development.

Competencies

Knowledge

1. Describe the four developmental domains of childhood as defined by the Denver Developmental exam (e.g. gross motor, fine motor, language, and social development. (CP)
2. Describe how abnormal findings on the development screening tools would suggest a diagnosis of developmental delay (CP), autism (M), pervasive developmental delay (M), and mental retardation. (M)
3. Describe the initial evaluation and need to refer a patient with evidence of developmental delay or abnormality. (M)

Skills

1. Demonstrate an ability to assess psychosocial, language, physical maturation, and motor development in pediatric patients using appropriate resources (e.g. Bright Futures, the Denver Developmental Standard Test 2, and HEADSS. (CP) Key features might include the following:

- Newborn/Infant –Disappearance of primitive reflexes; changes in tone and posture; cephalocaudal progression of motor milestones during the first year; stranger anxiety.
- Toddler/child - Separation and autonomy in two to three-year olds; sequence of language development; concept of school readiness
- Adolescent - Sequence of physical maturation (e.g. Tanner scales), cognitive development, and assessment of psychosocial and emotional development (e.g. HEADSS).

Processes:

All students on the Pediatric Clerkship should see a patient with a patient with real or possible (e.g. parental concerns) issues related to development (e.g. delayed or possibly delayed language, motor, fine motor, or social adaptive skills)

VI. BEHAVIOR

Rationale:
Providing anticipatory guidance especially in the areas of normative or expected behaviors and identification of abnormal behavior is critical to pediatric practice. Knowledge of age-appropriate behavior allows the physician to recognize deviant behaviors and facilitates earlier intervention.

Prerequisites:
- Recognition that the developmental tasks of infancy, childhood and adolescence differ.
- Knowledge of the genetic and environmental influences on behavior and behavioral patterns.

Competencies:
Knowledge
1. Identify normal pattern of behaviors in the developing child such as (CP):
   - newborn infants: development and evolution of social skills
   - toddler: autonomy
   - school age: independence
   - adolescence: abstract thinking
2. Describe the typical presentation of common behavioral problems and issues in different age groups such as: (CP)
   - Newborn/infants: sleep problems, colic
   - toddler: temper tantrums, toilet training, feeding problems
   - school age: enuresis, attention deficit, encopresis (M), autism (M)
   - adolescence: eating disorders (CP), risk-taking behavior (CP), conduct disorders (M)
3. Describe the emotional disturbances or medical conditions that may manifest as alterations in school performance and peer or family relationships. (CP)
4. Distinguish between age-appropriate behavior, inappropriate or abnormal behavior, and those that suggest severe psychiatric or development illness in children of different ages (for example head banging, threatening gestures, suicidal) (M)
5. Describe how somatic complaints may represent psychosocial problems (e.g. recurrent abdominal pain, headache, fatigue, and neurologic complaints (U)
6. Describe the types of situations where pathology in the family (e.g. alcoholism, domestic violence, depression) contributes to childhood behavior problems (U)

Skills
1. Identify behavioral and psychosocial problems of childhood using the medical history and physical examination. (CP)
2. Counsel parents and children about the management of common behavioral concerns such as discipline, toilet training, and eating disorders. (M)

Processes:
All students on the Pediatric Clerkship should see a patient or patients with an individual or parental concern over a specified behavior or group of behaviors (e.g. sleep problems, colic, temper tantrums, toilet training, feeding problems, enuresis, attention deficit, encopresis, autism, eating disorders, conduct disorders, head banging, poor school performance).

VII. NUTRITION

Rationale
Proper nutrition promotes growth and helps maintain health. Some degree of assessment of nutrition is a component of almost every pediatric medical visit. In patients presenting with abnormal growth, nutritional assessment is central to diagnosis and treatment.

Prerequisites

- The appropriate balance of food groups (e.g., the food pyramid of the United States Department of Agriculture/Department of Health and Human Services).
- Basic science course work on body metabolism, the respective roles of dietary fats, carbohydrates, and protein, and the need for vitamins and minerals.
- The role of nutrition in preventive health (e.g., the National Cholesterol Education Program guidelines for adults).

Competencies
Knowledge
1. Describe the advantages of breastfeeding and describe common difficulties experienced by breastfeeding mothers. (CP)
2. Describe the signs and symptoms of common nutritional deficiencies in infants and children (e.g. iron, vitamin D, fluoride, and inappropriate caloric volume) and how to prevent them. (CP)
3. Identify children with specific or special nutritional needs (e.g. patients with chronic illness, prematurity, abnormal growth patterns, failure to thrive, obesity, or when family risk factors suggest the possibility that nutritional modification will be needed). (CP)
4. Describe nutritional factors that contribute to the development of childhood obesity and to failure to thrive. (CP)
5. Discuss risk factors for the development of cardiac disease and diabetes with families. (U)
6. Describe the endocrine, cardiovascular, and orthopedic consequences of childhood obesity. (M)

Skills
1. Obtain a dietary history in children of different ages that includes the following: (CP):
   - Infants: type, amount and frequency of breast or formula feeding, solid foods, and dietary supplements (vitamins, iron, fluoride).
   - Toddler/school age child: milk, juice, soda, fast foods, and meal patterns
   - Adolescents: meal patterns, nutritional supplements, milk, juice, soda, alcohol, snacking, and fad diets

2. Determine the caloric adequacy of an infant's diet. (CP)
3. Provide nutritional advice to families regarding the following: (CP)
   - Breastfeeding vs. formula feeding
   - Addition of solids to an infant's diet
   - Introduction of cow's milk to an infant's diet
   - Healthy food choices for children and adolescents
   - Exercise and TV or video viewing and their effect on obesity

Processes
All students on the Pediatric Clerkship should see a patient or patients with self or parental concerns or questions about appropriate nutrition (e.g. failure to thrive, questions about breast vs. bottle feeding, questions about switching to formula, when to add solids). This can be in the context of a routine health care supervision visit.

VIII. PREVENTION

Rationale
Physicians routinely incorporate strategies for prevention of illness and injury into routine health supervision. Immunizations have resulted in a drastic reduction in the rates of certain infectious diseases. Injuries cause the majority of deaths in childhood and adolescence. Illness and injury prevention must be a prominent and recurrent theme during health maintenance and other health care visits. The American Academy of Pediatrics most medical groups no longer use the term "accident" as most childhood injuries are believed to be predictable and preventable.

Note: There is a significant amount of overlap with the Health Supervision portion of the curriculum. Poisoning is covered in a separate section. Domestic violence is also addressed in the sections on Behavior, Issues Unique to Adolescence, and Child Abuse.

Prerequisites

- Knowledge of clinical epidemiologic concepts as they pertain to estimation of health risk and prevention of illness and injury.
- Understanding of the impact that culture, socioeconomic status and environment have on illness and injury prevalence and patterns.
- An understanding of childhood development in order to better understand risk and provide age appropriate prevention strategies.

Competencies
Knowledge
1. Describe how risk of illness and injury change during growth and development and give examples of the age-and development-related illnesses and injuries. (CP)
2. List the immunizations currently recommended from birth through adolescence and identify patients whose immunizations are delayed. (CP)
3. Describe the rationale, and general indications and contraindications of immunizations. (CP)
Explain how screening for family violence may serve as an important preventive health practice. (CP)
4. Describe the key components of a pre participation sports physical. (M)
Describe infection control precautions that help limit the spread of infectious diseases in patients and health care providers (e.g. handwashing, masks, and N-95 masks in patients with tuberculosis). (U)

Skills
Provide age-appropriate anticipatory guidance for the following: motor vehicle safety, infant sleeping position, falls, burns, poisoning, fire safety, choking, water safety, bike safety, sexually transmitted diseases, firearms and weapons. (CP)

IX. ISSUES UNIQUE TO ADOLESCENCE

Rationale

Adolescence represents the stage of human growth and development between childhood and adulthood. During this time, significant physical, cognitive, and psychosocial changes occur.

Prerequisites

- Introductory communication and interviewing skills
- Knowledge of the anatomy, physiology, and endocrinology related to growth and reproduction
- A framework for understanding childhood development

Competencies

Knowledge

1. Describe the unique features of the physician-patient relationship during adolescence including confidentiality and consent. (CP)
2. Identify and describe the sequence of the physical changes of puberty (e.g. Tanner scale). (CP)
3. List the components of health supervision for an adolescent, such as personal habits, pubertal development, immunizations, acne, scoliosis, sports participation, and indications for pelvic exam. (CP)
4. Describe the common risk-taking behaviors of adolescents, such as alcohol and other drug use, sexual activity and violence (CP)
5. Describe the contributions of unintentional injuries (CP), homicide (CP), suicide (CP) and HIV/AIDS (M) to the morbidity and mortality of adolescents.
6. Describe the features of common mental health problems in adolescence, including school failure, attention deficit, body image, eating disorders, depression and suicide. (CP)
7. Describe an approach to counseling an adolescent regarding sexual activity, substance abuse, and personal safety. (M)
8. Describe the unique difficulties encountered by adolescents with chronic diseases, including adherence and issues of autonomy vs. dependence. (M)
9. Discuss the characteristics of early, mid and late adolescence in the terms of cognitive and psychosocial development. (M)

Skills

1. Interview an adolescent patient, using the HEADSS method, to ask sensitive questions about lifestyle choices that affect health and safety (e.g. sexuality, drug, tobacco and alcohol use) (CP) and give appropriate counseling (M)
2. Conduct a physical examination of an adolescent that demonstrates respect for privacy and modesty, employing a chaperone when appropriate. (CP)
3. Conduct a pre-participation sports examination and demonstrate the key components of that examination necessary to clear an individual for participation in strenuous exercise (special senses, cardiac, pulmonary, neurological, and musculo-skeletal). (M)
4. Conduct a health supervision visit for a healthy adolescent, incorporating a psychosocial interview, developmental assessment and appropriate screening and preventive measures. (M)

Processes

All students on the Pediatric Clerkship should see an adolescent patient or patients.

X. ISSUES UNIQUE TO THE NEWBORN

Rationale
The transition from intrauterine life to extrauterine independent existence is a major event: physiologically for the baby, emotionally for the family, and medically for the health care team. Physicians must have an appreciation for the physiologic changes a newborn experiences. The newborn has unique needs and vulnerabilities that are distinct from other periods of infancy. Most of the information covered in this section is pertinent in the first few hours and days of life. However, the newborn period extends through to the first month of life.

Prerequisites
- Embryology
- Fetal physiology
- Knowledge of the basics of antepartum and intrapartum care, particularly maternal screening tests and common maternal complications that can affect the newborn.

Competencies
Knowledge

1. Describe the transition from the intrauterine to the extrauterine environment, including temperature regulation, cardiovascular/respiratory adjustment, glucose regulation, and initiation of feeding. (CP)
2. List the information from the history of pregnancy, labor, and delivery obtained from the parents or medical record that has implications for the health of the newborn. (CP)
4. Describe how gestational age can be assessed with an instrument such as the Ballard scale and identify key indications of gestational maturity. (CP)
5. Describe the challenges for parents adjusting to a new infant in the home. (CP)
6. List the differential diagnosis and complications for the following common problems that may occur in the newborn
    - jaundice (CP)
    - respiratory distress (CP)
    - poor feeding (CP)
    - large and small for gestation infants (e.g. congenital infection) (CP)
    - "state" abnormalities which includes tremulousness, irritability, lethargy from causes such as drug withdrawal, hypoglycemia, sepsis (CP)
    - prematurity (M)
7. Describe how gestational age affects risks of morbidity or mortality in the newborn period (for example lung disease, hypothermia, and glucose homeostasis) (M)

Skills

1. Perform a complete physical examination of the newborn infant. (CP)
2. Give parents of a newborn anticipatory guidance for the following issues: (CP)
    - the benefits of breast-feeding vs. formula for the newborn and mother
    - normal bowel and urinary elimination patterns
    - normal neonatal sleep patterns
    - newborn screening tests to include screens for metabolic and infectious conditions and hearing loss
    - appropriate car seat use
    - prevention of SIDS ("back to sleep"):

- immunizations (e.g. HBV)
- medications (e.g. eye prophylaxis and vitamin K)
- the role of circumcision

Processes:
All students on the Pediatric Clerkship should see one or more newborns and a newborn with jaundice.

XI. MEDICAL GENETICS AND DYSMORPHOLOGY

Rationale

A physician should be able to distinguish between congenital disorders (disorders present at birth) that are genetic from those that are non-genetic, as well as recognize common genetic diseases presenting later in childhood. Genetic abnormalities may produce congenital malformations, metabolic disturbances, specific organ dysfunction, abnormal growth patterns, and abnormalities of sexual differentiation. New technology and knowledge of genetics have raised ethical questions that physicians and society will need to address.

Prerequisites

- Knowledge of gene structure, regulation and function
- Basic knowledge of the Human Genome Project and the role of genetic inheritance in multifactorial diseases, such as cancer, heart disease and diabetes
- Basic mechanisms of Mendelian inheritance, multifactorial inheritance, the "carrier" state, incomplete penetrance, variable expression, and spontaneous mutations.
- Basic embryology and teratology
- Introductory history taking and physical examination skills

Competencies

Knowledge

1. Describe the genetic basis and clinical manifestations of the following syndromes, malformations, and associations:
    - Common chromosomal abnormalities, (e.g. Trisomy 21 (CP), Turner syndrome (CP), Klinefelter syndrome (M)
    - Syndromes due to teratogens (e.g. fetal alcohol syndrome) (CP)
    - Other common genetic disorders (e.g. cystic fibrosis, sickle cell disease, hemophilia) (CP)
    - Single malformations with multifactorial etiology (e.g. spina bifida, congenital heart disease, cleft lip and palate)(M)

2. List common medical and metabolic disorders (e.g. hearing loss, hypothyroidism, PKU, hemoglobinopathies) detected through newborn screening programs. (CP)
3. Discuss the effects of maternal health and potentially teratogenic agents on the fetus and child, including maternal diabetes and age (CP), alcohol use (CP) illicit drug use (CP), and prescribed medications such as phenytoin, valproate, and retinoic acid (M)
4. List common prenatal diagnostic assessments (e.g. maternal serum screening, amniocentesis, and ultrasonography) and understand their use (M)
5. Describe the use of chromosome studies in the diagnosis of genetic disorders (M)
6. Discuss the role of genetics in common multifactorial conditions (e.g. inflammatory bowel disease, pyloric stenosis, congenital heart disease, cleft lip, diabetes and cancer) (M)

Skills

1. Use a family history to construct a pedigree (e.g., for the evaluation of a possible genetic disorder). (CP)

XII. COMMON ACUTE PEDIATRIC ILLNESSES

Rationale
Patients often come to medical attention because of a specific problem or complaint. The physician must solve the problems posed by the patient using information obtained from the history, the physical examination and, when appropriate, laboratory tests and/or imaging studies. In the problem-solving process, the physician typically develops differential diagnoses for each of the problems identified. The diagnostic process demands knowledge of disease etiology, pathophysiology and epidemiology and of the patient's gender, ethnicity, environment and prior health status.

When the patient is an infant, child, or adolescent, the physician must also consider the effects of age, physical growth, developmental stage and family environment. Commonly occurring illnesses are first considered, but other, less common disorders may need to be included in the evaluation of various clinical problems.

Prerequisites

- Pathophysiology of common diseases.
- Fundamentals of epidemiology.
- Principles of pharmacology including pharmacokinetics and pharmacodynamics, and indications for drugs.
- Basic clinical data gathering skills.

Competencies
Knowledge
2. List the age appropriate differential diagnosis for pediatric patients presenting with each of the following symptoms. (CP) (See appendix for CP and M level differential diagnosis)

- Abdominal pain
- Cough and/or wheeze
- Diarrhea
- Fever and rash
- Fever without a source
- Headache
- Lethargy or irritability
- Limp or extremity pain
- Otalgia
- Rash
- Rhinorrhea
- Seizures
- Sore throat
- Vomiting

3. List the age appropriate differential diagnosis for pediatric patients presenting with each of the following physical findings. (CP) (See appendix for CP and M level differential diagnosis)

- Abdominal mass
- Bruising

- Heart murmur
- Hepatomegaly
- Lymphadenopathy
- Splenomegaly
- Petechiae and/or purpura
- Red or wandering eye
- White pupillary reflex

4. List the age appropriate differential diagnosis for pediatric patients presenting with each of the following laboratory findings. (CP) (See appendix for CP and M level differential diagnosis)

- Anemia
- Hematuria
- Proteinuria
- Positive Mantoux skin test (PPD)

5. Describe the epidemiology, clinical, laboratory, and radiographic findings, of each of the core pediatric level conditions listed for each presenting complaint. (CP)
6. Explain how the physical manifestations of disease (CP) and the evaluation (CP) and management (M) may vary with the age of the patient. Be able to give specific examples.
7. Discuss the characteristics of the patient and the illness that must be considered when making the decision to manage the patient in the hospital or in the outpatient setting. (M)
8. Describe the epidemiology, clinical, laboratory, and radiographic finding for each of the mastery level conditions listed for each presenting complaint. (M)

Skills
1 Perform an age-appropriate history and physical examination pertinent to the presenting complaint of the child (see also Skills).
2. Generate an age appropriate differential diagnosis and initial diagnostic and therapeutic plan for each patient presenting with one of the following symptoms, physical examination findings, or laboratory findings (see also Clinical Reasoning). (CP)

Symptoms

- Abdominal pain
- Cough and/or wheeze
- Diarrhea
- Fever and rash
- Fever without a source
- Headache
- Lethargy or irritability
- Limp or extremity pain
- Otalgia

- Rash
- Rhinorrhea
- Seizures
- Sore throat
- Vomiting

Physical examination findings

- Abdominal mass
- Bruising
- Heart murmur
- Hepatomegaly
- Lymphadenopathy
- Petechiae and/or purpura
- Splenomegaly
- Red or wandering eye
- White pupillary reflex

Laboratory tests

- Anemia
- Hematuria
- Proteinuria
- Positive Mantoux skin test (PPD)

Processes:
All students on the Pediatric Clerkship should see a patient or patients with the following system or symptom based complaints: (see appendix)

- Upper respiratory tract complaint e.g. sore throat, difficulty swallowing, otalgia
- Lower respiratory tract complaint e.g. cough, wheeze, shortness of breath
- Gastrointestinal tract complaint e.g. nausea, vomiting, diarrhea, abdominal pain
- Skin or mucous membrane complaint e.g. rash, pallor
- Central nervous system complaint e.g. headache, lethargy, irritability, fussiness
- Fever without localizing findings

XIII. COMMON CHRONIC ILLNESS AND DISABILITY

Rationale
Pediatricians are more frequently being asked to care for children with chronic medical conditions and exacerbations of their chronic illness. Physicians will need to understand the long term medical needs, implications and complications of the disorder for the patient as well as the family.

Prerequisites
An understanding of the pathophysiology and epidemiology of the following chronic illnesses: allergies, asthma, sensory impairment, cerebral palsy disability, cystic fibrosis, sickle cell disease, seizure disorder, diabetes mellitus, childhood malignancy, AIDS.

Competencies
Knowledge
1. Describe the clinical features of chronic medical conditions seen in children such as: (CP)
    asthma
    atopic dermatitis
    cerebral palsy
    cystic fibrosis
    diabetes mellitus
    epilepsy
    malignancy (e.g. acute lymphocytic leukemia and Wilms tumor)
    obesity
    seasonal allergies
    sickle cell disease
    HIV/AIDS (M)
    sensory impairment (M)

2. Describe how chronic illness can influence a child's growth and development, educational achievement, and psychosocial functioning. (CP)
3. Describe the impact that chronic illness has on the family's emotional, economic and psychosocial functioning. (U)
4. Describe the impact of a patient's culture on the understanding, reaction to, and management of a chronic illness (U)
5. Describe the contributions of each member of a multidisciplinary health care team in caring for children with a chronic illness. (M)
6. Identify the key components of delivering "Bad News" in relation to chronic illness. (MU)
7. Explain the management strategies for common chronic illnesses seen in children such as asthma, seasonal allergies, diabetes, and atopic dermatitis (M)

Skills
1. Perform a medical interview and a physical examination in a child with a chronic illness that includes the (CP)
- effects of the chronic illness on growth and development,
- emotional, economic and psychosocial functioning of the patient and family, the
- treatments used, including "complementary and alternative therapies."

Processes: Students on the clerkship should see one or more patients with one of the chronic medical conditions listed above. This can be in the context of an acute or routine visit.

XIV. THERAPEUTICS

Rationale

Appropriate and successful treatment requires choice of the correct medication, the appropriate dose, and both a dosage form and a dosing regimen that will maximize compliance. The pharmacokinetics (absorption, metabolism, distribution and elimination) of medications change under the influence of growth and physiologic maturation. Child behavior and psychomotor development influence the form of medication dispensed and the expectation for compliance.

Prerequisites

- Knowledge of general pharmacokinetics and pharmacodynamics
- Knowledge of the physiologic and behavioral changes that occur during childhood

Competencies

Knowledge:

1. Describe how to assess whether a drug is excreted in the breastmilk and safe to use by a breast-feeding mother. (CP)
2. List medications such as aspirin, tetracycline, and oral retinoic acid that are contraindicated or must be used with extreme caution in specific pediatric populations. (CP)
3. Describe the appropriate use of the following common medications in the outpatient setting, including when it is NOT appropriate to treat with a medication: (U)
    - Analgesics / antipyretics
    - Antibiotics
    - Bronchodilators
    - Corticosteroids
    - Cough and cold preparations
    - Ophthalmic preparations
    - Otic preparations
    - Vitamin / mineral supplements

4 Select generally accepted pharmacologic therapy for common or life-threatening conditions in pediatric patients. (CP) These conditions could include:

- Common conditions seen in ambulatory settings:
    - Acne
    - Acute otitis media
    - Allergic rhinitis
    - Asthma
    - Atopic dermatitis
    - Candida dermatitis
    - Fever
    - Impetigo
    - Streptococcal pharyngitis
- Common conditions seen in hospitalized patients
    - Bronchiolitis
- Life threatening conditions
    - Sepsis/meningitis
    - Status epilepticus (M)

5. Describe the ways medication errors are systemically prevented. (U)

Skills:

1. Calculate a drug dose for a child based on body weight. (CP)
2. Write a prescription e.g. for a common medication such as an antibiotic. (U)
3. Negotiate a therapeutic plan with the patient and family to maximize adherence with the agreed upon treatment regimens and assess the family's understanding of the plan. (MU)

XV. FLUID AND ELECTROLYTE MANAGEMENT

Rationale
All human beings need an uninterrupted supply of water, electrolytes, and energy. Excessive or diminished fluid intake or losses may lead to severe physiologic derangements, with significant morbidity and even mortality.

Prerequisites:
Knowledge of the following:

- Water and electrolyte distribution in body compartments.
- The relationship between basal metabolic rate and daily water requirements.
- Daily glucose requirements.
- The role of the adrenal gland and antidiuretic hormone (ADH) in maintaining serum sodium and body water balance.
- Pathophysiology of hypernatremic and hyponatremic dehydration.

Competencies:
Knowledge:
1. Describe the conditions in which fluid administration may need to be restricted (such as the syndrome of inappropriate ADH secretion, congestive heart failure, or renal failure) or increased (e.g. fever). (U)
2. Describe the physical findings in hypovolemic shock and the approach to restoration of circulating fluid volume (i.e. "rescue" fluid infusion) (U)
3. Describe the causes and consequences of fluid imbalances and electrolyte disturbances leading to dehydration and such conditions as hypernatremia, hyponatremia, hyperkalemia, hypokalemia, and severe acidosis. (U)

Skills:
1. Obtain historical and physical finding information necessary to assess the hydration status of a child. (CP)
2. Calculate and write orders for intravenous maintenance fluids for a child considering daily water and electrolyte requirements. (CP)
3. Calculate and write orders for the fluid therapy for a child with severe dehydration caused by gastroenteritis to include "rescue" fluid to replenish circulating volume, deficit fluid, and ongoing maintenance. (CP)
4. Explain to parents how to use oral rehydration therapy for mild to moderate dehydration. (CP)

XVI. POISONING

Rationale
Poisonings and ingestions are major preventable causes of childhood morbidity and mortality. Poisoning control centers across the U.S. receive more than millions calls a year regarding accidental and non-accidental ingestions and exposures to toxic materials.

Prerequisites:

- Knowledge of the routes of absorption of toxins including the gastrointestinal tract, the skin, and lungs.
- An understanding that a relationship exists between the mechanism of injury, the child and the environment
- The concept of therapeutic index

Competencies
Knowledge
1. Describe the developmental vulnerability for poisoning and accidental ingestions in infants, toddlers, children, and adolescents. (CP)
2. List the ages at which prevalence of unintentional and intentional poisonings is highest and the passive and active interventions that decrease the incidence of childhood ingestions (e.g. locks or safety caps). (CP)
3. Describe the emotions of guilt and anxiety that may be present in the parent, caregiver or child at the time of ingestion. (CP)
4. Describe the environmental sources of lead, the clinical and social importance of lead poisoning, and screening tools to identify children at risk for lead poisoning. (CP)
5. Describe the acute signs and symptoms of accidental or intentional ingestion of acetaminophen (CP), iron (CP), alcohol (CP), narcotics (CP) PCP (M), tricyclic antidepressants (M), volatile hydrocarbons (M), and caustics (M).
6. Describe the immediate emergency management of children with toxic ingestions e.g. acetaminophen (CP), iron (CP), hydrocarbons (M), and strong alkali (M).
7. Describe the role of the Poison Control Center (1-800-222-1222) and other information resources in the management of the patient with an accidental or intentional ingestion. (CP)
8. Describe the agents and acute signs and symptoms of intentional chemical (e.g. cholinergic) or biologic agents. (M)

Skills:
1. Provide anticipatory guidance regarding home safety and appropriate techniques to prevent accidental ingestions (see also Prevention) (CP)
2. Elicit a complete history when evaluating an unintentional ingestion or exposure to a toxic substance (including the substance, the route of exposure, the quantity, timing, and general preventive measures in the household) (U)
3. Elicit a complete history surrounding the intentional ingestion of a toxic substance (including the substance, route of exposure, amount, timing, antecedent events, and stressors). (M)

XVII. PEDIATRIC EMERGENCIES

Rationale
All health care providers must be able to identify the infant, child, or adolescent with a medical emergency. A systemic and thorough approach to the seriously ill child may significantly reduce morbidity and mortality.

Prerequisites

- Knowledge of the cardiopulmonary responses to decreased or relatively decreased intravascular volume.
- Certification in basic cardiopulmonary resuscitation.

Competencies
Knowledge
1. List the symptoms of and describe the initial emergency management of shock, respiratory distress, lethargy, apnea, and status epilepticus in pediatric patients. (CP)
2. Describe the age-appropriate differential diagnosis and the key clinical findings that would suggest a diagnosis for each of the emergent clinical problems in the table below.
3. Describe the clinical findings for each of the diagnosis to consider in the table below.

Pediatric Emergencies Table

Emergent Clinical Problem	Diagnoses to Consider (Core pediatric level)	Diagnoses to Consider (mastery pediatric level)
Airway Obstruction / Respiratory distress	Croup, bronchiolitis, asthma, pneumonia, foreign body aspiration, anaphylaxis	peritonsillar or retropharyngeal abscess
Altered mental status (Delirium/lethargy)	Head injury, increased ICP, substance abuse, infection (encephalitis, meningitis), diabetic ketoacidosis, hypoglycemia, abuse, shock, hypoxemia.	intussusception
Apnea	acute life-threatening event (ALTE), seizures, and respiratory infections (RSV and pertussis), GERD, sepsis	cardiac dysrhythmias, breath holding spells
Ataxia		ingestion, infection, and tumor
Gastrointestinal bleeding	Meckel's diverticulum, fissure, intussusception	inflammatory bowel disease, allergic colitis, peptic ulcer disease
Injuries and accidents	Animal bites, minor head injury, nursemaids elbow	sprains and fractures, burns, near drowning, lacerations
Proptosis		tumor and orbital cellulitis
Seizures	Infection (i.e., meningitis or encephalitis), status epilepticus, febrile, ingestion, hypoxemia, shock, electrolyte disturbances	tumor
Shock	Sepsis, severe dehydration, diabetic ketoacidoses, anaphylaxis, congestive heart failure and ingestion.	Burns, neurogenic shock, ductal dependent heart lesions, and adrenal insufficiency
Suicidal Ideation	Depression (U)	

Skills
1. Demonstrate the appropriate anticipatory guidance to prevent life-threatening conditions (e.g. infant positioning for sudden infant death syndrome (SIDS), locks to prevent poisoning, and the use of car seats and bicycle helmets) (see also Prevention). (CP)
2. Demonstrate the "ABC" assessment as a means for identifying who requires immediate medical attention and intervention. (U)
Processes: All students on the pediatric clerkship should see a patient or patients, real or simulated, with respiratory distress

XVIII. CHILD ABUSE

Rationale

Abuse may include physical, sexual and/or emotional trauma or may occur in the form of neglect when caregivers fail to provide basic physical, psychological or medical needs. Recognition of abuse or neglect can dramatically affect a child's life. Students and other health care providers need to understand the medical, legal, and social implications of suspected abuse and recognize the role of the physician in preventing child abuse and family violence, through routine assessment of family dynamics, early identification of children at risk, and cooperation with community services that support families.

Prerequisites

- Basic clinical data-gathering and communication skills with families and professionals.

- Knowledge of the epidemiology of domestic violence including those factors that increase the risk of domestic violence.

Competencies

Knowledge

1. List characteristics of the history and physical examination that should trigger concern for possible physical, sexual, and psychological abuse and neglect e.g. such as inconsistency in the history, unexplained delays in seeking care, injuries with specific patterns or distributions on the body, or injuries incompatible with the child's development. (CP)
2. Describe the medical-legal importance of a full, detailed, carefully documented history and physical examination in the evaluation of child abuse. (CP)
3. Discuss the concurrence of domestic violence and child abuse and describe markers that suggest the occurrence of family violence. (U)
4. Describe the unique communication skills required to work with families around issues of maltreatment. (M)
5. Summarize the responsibilities of the "mandatory reporter" to identify and report suspected child abuse. Know to whom such a report should be made. (M)

XIX. CHILD ADVOCACY

Rationale
Physicians have a variety of roles in child health, including a public health role wherein they serve as patient and family advocates. Since children are unable to advocate for themselves and many of their families are not empowered, physicians must advocate for them at the individual, local, national and global level.

Prerequisites
Understand the role of the physician as an advocate.

Competencies
Knowledge
1. Describe barriers that prevent children from gaining access to health care, including financial, cultural and geographic barriers. CP
2. Identify opportunities for advocacy during a health supervision visit. CP
3. Describe critical components of partnering with the community members to promote child health. (M)
4. Describe the types of problems that benefit more from a community approach rather than an individual approach. (M)
5. Identify a specific pediatric healthcare issue and outline a potential approach to advocacy. (M)