PEDIATRIC CLERKSHIP LEARNING OBJECTIVES

4 credit hours

PROFESSIONAL CONDUCT & 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 attitude, behaviors, and beliefs that serve to promote the patient’s best interest.

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 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. The student must be alert for the child or adolescent at risk. The physician’s primary obligation is to promote the best interest of the patient.

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.

Competencies in Professional Conduct and Attitudes

A. Humanism and Professionalism in Patient and Family Encounters:

Knowledge
1. Demonstrate behaviors that respect the patient’s privacy, modesty, & confidentiality.

Skills
1. Demonstrate communication skills with patients and families that convey respect, integrity, flexibility, sensitivity, and compassion.
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.
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.

B. Professionalism with Members of the Health Care Team
1. Demonstrate collegiality and respect for all members of the health care team.
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).

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.

SKILLS

Rationale
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.

General Competencies
1. Demonstrate an ability to perform an age-appropriate history and physical examination in children of all ages.

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:

   Past History
   Neonatal history, including: Birth weight and approximate gestational age.
   Maternal complications, such as extent of prenatal care, infections, exposure to drugs, alcohol, or medications. Problems in the newborn period, such as prematurity, respiratory distress, jaundice, and infections. Immunizations, previous hospitalizations, surgeries, medications and medication allergies, chronic medical conditions, growth and development, and nutrition.

   Family History
   Age and health of family members to include acute and chronic medical conditions.
   Drug and alcohol abuse.
   Construct a family pedigree.

   Social History
   Household composition and socioeconomic status. School, caregiver, and peer relationships. HEADSS assessment. Environmental and Personal Safety Assessment to include: Seat belts and car seats, bicycle helmets, firearms in the home, smoking, lead exposure and home safety for infants and toddlers.

B. Physical Examination Skills
1. Conduct a pediatric physical examination appropriate to the nature of the visit or complaint (complete vs. focused) and the age of the patient.
2. Demonstrate an ability to perform the following examination skills.

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

   Vital Signs
   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).
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.
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.

Neck
Palpate lymph nodes and describe what anatomic areas they drain.
Demonstrate maneuvers that test for nuchal rigidity.
Palpate the thyroid and any neck masses.

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

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

Abdomen
Palpate the liver, spleen, and kidneys, and interpret the findings based on the age of the patient. Assess the abdomen for distention, tenderness, and masses through observation, auscultation, and palpation. Determine the need for a rectal examination.

Genitalia
Describe the difference in appearance of male and female genitalia at different ages and developmental (e.g. Tanner) stages. Palpate the testes and identify genital abnormalities in males, including cryptorchidism. Recognize genital abnormalities in females including signs of virilization.

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. Recognize pathology, such as joint effusions, signs of trauma, and inflammation.

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

Neurologic
Elicit the primitive reflexes that are present at birth; describe how they change as the child develops.

Skin
Describe and assess turgor, perfusion, color, hypo and hyper pigmentated lesions, and rashes through observation and palpation. Identify jaundice, petechiae, purpura, bruising, vesicles, and urticaria.
C. 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).
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.
3. Document the history, physical exam, 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).
4. Write a prescription (see Therapeutic section) specific for a child’s weight.

D. Problem Solving Skills
1. Demonstrate an ability to generate an age-appropriate differential diagnosis and problem list based on the interview and physical examination.
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.
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.
4. Formulate a therapeutic plan appropriate to the working diagnosis.
5. Formulate an educational plan to inform the health care team and family of your thought process and decisions.
6. Search for relevant information using electronic (or other) data bases and critically appraise the information obtained to make evidence based decisions.

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.

Competencies
Knowledge
1. List the most common preventable morbidities in childhood and describe strategies for prevention.
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.
3. Describe the rationale for childhood immunizations and current recommendations.
4. Discuss the rationale and indications for screening tests (such as environmental lead questionnaire, domestic violence screening, CBC, urinalysis, blood lead level, and PPD).
5. Define anticipatory guidance and describe how it changes based on the age of the child.

Skills
1. Demonstrate an ability to provide age-appropriate anticipatory guidance about nutrition, behavior, immunizations, injury prevention, and pubertal development.

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.
Competencies

Knowledge
1. Describe variants of normal growth in health children, (e.g. familial short stature and constitutional delay).
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, and growth abnormalities related to specific physical findings).
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.

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.

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 neurologic function. Be familiar with normal patterns of development in order to detect deviations that might be the first sign of a medical or psychosocial problem.

Competencies

Knowledge
1. Describe the four developmental domains of childhood as defined by the Denver Developmental exam (gross motor, fine motor, language, and social development).
2. Describe how abnormal findings on the developmental screening tools would suggest a diagnosis of developmental delay.

Skills
1. Demonstrate an ability of 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).

BEHAVIOR

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

Competencies

Knowledge
1. Identify normal pattern of behaviors in the developing child such as:
   - 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:
   - newborn/infants: sleep problems, colic
   - toddler: temper tantrums, toilet training, feeding problems
   - school age: enuresis, attention deficit
   - adolescence: eating disorders, risk-taking behavior
3. Describe the emotional disturbances or medical conditions that may manifest as alterations in school performance and peer or family relationships.
4. Describe how somatic complaints may represent psychosocial problems (e.g. recurrent abdominal pain, headache, fatigue, and neurologic complaints).
5. Describe the types of situations where pathology in the family (e.g. alcoholism, domestic violence, depression) contributes to childhood behavior problems.

NUTRITION

Rationale
Proper nutrition promotes growth and helps maintain health. In patients with abnormal growth, nutritional assessment is central to diagnosis and treatment.

Competencies
Knowledge
1. Describe the advantages of breastfeeding.
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.
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).
4. Describe nutritional factors that contribute to the development of childhood obesity & failure to thrive

Skills
1. Obtain a dietary history in children of different ages that includes the following: infants: type, amount and frequency of breast or formula feeding, solid foods, and dietary supplements (vitamins, iron, fluoride) toddler/school age: milk, juice, soda, fast foods, and meal patterns adolescents: meal patterns, nutritional supplements, milk, juice, soda, alcohol, snacks, and fad diets
2. Determine the caloric adequacy of an infant’s diet.
3. Provide nutritional advice to families regarding the following: 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, and exercise and TV or video viewing and their effects on obesity.

PREVENTION

Rationale
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. Most childhood injuries are believed to be predictable and preventable.

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.
2. Explain how screening for family violence may serve as an important preventative health practice.

Skills
1. 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.
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.

Competencies

Knowledge
1. Describe the unique features of the physician-patient relationship during adolescence including confidentiality and consent.
2. Identify and describe the sequence of the physical changes of puberty (e.g. Tanner scale).
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.
4. Describe the common risk-taking behaviors of adolescents, such as alcohol and other drug use, sexual activity and violence.
5. Describe the contributions of unintentional injuries, homicide, suicide, and 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.

Skills
1. Interview an adolescent patient, using the HEADS method, to ask sensitive questions about lifestyle choices that affect health and safety (e.g. sexuality, drug, tobacco, and alcohol use) and give appropriate counseling.
2. Conduct a physical examination of an adolescent that demonstrates respect for privacy and modesty, employing a chaperone when appropriate.

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.

Competencies

Knowledge
1. Describe the transition from the intrauterine to extrauterine environment, including temperature regulation, cardiovascular/respiratory adjustment, glucose regulation, and initiation of feeding.
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.
3. Describe how gestational age can be assessed with an instrument such as the Ballard scale and identify key indications of gestational maturity.
4. Describe the challenges for parents adjusting to a new infant in the home.
5. List the differential diagnosis and complications for the following common problems that may occur in the newborn: jaundice, respiratory distress, poor feeding, large or small for gestation infants (e.g. congenital infection), and ‘state’ abnormalities which includes tremulousness, irritability, lethargy from causes such as drug withdrawal, hypoglycemia, and sepsis.

Skills
1. Perform a complete physical examination of the newborn infant.
2. Give parents of a newborn anticipatory guidance for the following issues: 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), and the role of circumcision.
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 malformation, metabolic disturbances, specific organ dysfunction, abnormal growth patterns, and abnormalities of sexual differentiation.

Competencies
Knowledge
1. Describe the genetic basis and clinical manifestations of the following syndromes, malformations, and associations: common chromosomal abnormalities (e.g. Trisomy 21, Turner syndrome), syndromes due to teratogens (e.g. fetal alcohol syndrome), and other common genetic diso (e.g. cystic fibrosis, sickle cell disease, or hemophilia).
2. List common medical and metabolic disorders (e.g. hearing loss, hypothyroidism, PKU, hemoglobinopathies) detected through newborn screening programs.
3. Discuss the effects of maternal health and potentially teratogenic agents on the fetus and child, including maternal diabetes and age, alcohol use, and illicit drug use.

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

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. 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.

Competencies
Knowledge
1. List the age appropriate differential diagnosis and initial diagnostic and therapeutic plan for pediatric patients presenting with each of the following 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, and vomiting.
2. List the age appropriate differential diagnosis and initial diagnostic and therapeutic plan for pediatric patients presenting with each of the following physical findings: abdominal mass, bruising, heart murmur, hepatomegaly, lymphadenopathy, splenomegaly, petechiae and/or purpura, red or wandering eye, and white papillary reflex.
3. List the age appropriate differential diagnosis and initial diagnostic and therapeutic plan for pediatric patients presenting with each of the following laboratory findings: anemia, hematuria, proteinuria, and positive mantoux skin test (PPD).
4. Describe the epidemiology, clinical, laboratory, and radiographic findings, of each of the core pediatric level conditions listed for each presenting complaints.

COMMON CHRONIC ILLNESS AND DISABILITY

Rationale
Physicians will need to understand the long term medical needs, implications, and complications of a chronic disorder for the patient as well as the family.
Competencies

Knowledge
1. Describe the clinical features of chronic medical conditions seen in children such as: asthma, atopic dermatitis, cerebral palsy, cystic fibrosis, diabetes mellitus, epilepsy, malignancy (e.g. acute lymphocytic leukemia and Wilms tumor), obesity, seasonal allergies, and sickle cell disease.
2. Describe how chronic illness can influence a child’s growth and development, educational achievement, and psychosocial functioning.
3. Describe the impact that chronic illness has on the family’s emotional, economic, and psychosocial functioning.
4. Describe the impact of a patient’s culture on the understanding, reaction to, and management of a chronic illness.

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

THERAPEUTICS

Rationale
Appropriate and successful treatment requires choice of the correct medication, the appropriate dose, and both a dosage form and 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.

Competencies

Knowledge
1. List medications such as aspirin, tetracycline, and oral retinoic acid that are contraindicated or must be used with extreme caution in specific pediatric populations.
2. Describe the appropriate use of the following common medications in the outpatient setting: analgesics/antipyretics, antibiotics, bronchodilators, corticosteroids, cough and cold preparations, ophthalmic preparations, otic preparations, and vitamin/mineral supplements.
3. Select generally accepted pharmacologic therapy for common or life-threatening conditions in pediatric patients. These conditions could include:
   - Ambulatory settings: acne, acute otitis media, allergic rhinitis, asthma, atopic dermatitis, candida dermatitis, fever, impetigo, and streptococcal pharyngitis.
   - Hospitalized patients: bronchiolitis.
   - Life threatening conditions: sepsis/meningitis and status epilepticus.

Skills
1. Calculate a drug dose for a child based on body weight.
2. Write a prescription e.g. for a common medication such as an antibiotic.

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.
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).
2. Describe the physical findings in hypovolemic shock and the approach to restoration of circulating fluid volume (i.e. ‘rescue’ fluid infusion).
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.

Skills
1. Obtain historical and physical finding information necessary to assess the hydration status of child.
2. Calculate and write orders for intravenous maintenance fluids for a child considering daily water and electrolyte requirements.
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.

POISONING

Rationale
Poisonings and ingestions are major preventable causes of childhood morbidity and mortality.

Competencies

Knowledge
1. Describe the developmental vulnerability for poisoning and accidental ingestions in infants, toddlers, children, and adolescents.
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).
3. Describe the acute signs and symptoms of accidental or intentional ingestion of acetaminophen, iron, alcohol, and/or narcotics.
4. Describe the immediate emergency management of children with toxic ingestions (e.g. acetaminophen or iron).
5. 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.

Skills
1. 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).

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.

Competencies

Knowledge
1. List symptoms of and describe the initial emergency management of shock, respiratory distress, lethargy, apnea, and status epilepticus in pediatric patients.
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.
### EMERGENT CLINICAL PROBLEM | DIAGNOSIS TO CONSIDER
--- | ---
Airway Obstruction/Respiratory Distress | croup, bronchiolitis, asthma, pneumonia, foreign body aspiration, anaphylaxis
Altered mental status (delirium/lethargy) | head injury, increased ICP, substance abuse, infection (encephalitis, meningitis), diabetic ketoacidosis, hypoglycemia, abuse, shock, hypoxemia
Apnea | acute life-threatening event (ALTE), seizures and respiratory infections (RSV and pertussis), GERD, sepsis
Gastrointestinal bleeding | Meckel’s diverticulum, fissure, intussusception
Injuries and accidents | animal bites, minor head injury, nursemaids elbow
Seizures | infection (i.e. meningitis or encephalitis), status epilepticus, febrile, ingestion, hypoxemia, shock, electrolyte disturbances
Shock | sepsis, severe dehydration, diabetic ketoacidoses, anaphylaxis, congestive heart failure, and ingestion
Suicidal Ideation | depression

**Skills**
1. Demonstrate the appropriate anticipatory guidance to prevent life-threatening conditions.
2. Demonstrate the ‘ABC’ assessment as a means for identifying who requires immediate medical attention and intervention.

### 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.

**Competencies**

**Knowledge**
1. List characteristics of the history and physical exam 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.
2. Describe the medical-legal importance of a full, detailed, carefully documented history and physical examination in the evaluation of child abuse.
3. Discuss the concurrence of domestic violence and child abuse and describe markers that suggest the occurrence of family violence.

### 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.

**Competencies**

**Knowledge**
1. Describe barriers that prevent children from gaining access to health care, including financial, cultural, and geographic barriers.
2. Identify opportunities for advocacy during a health supervision visit.
TEXTS AND RESOURCES

Reference Text (Required):

*The Harriet Lane Handbook will be invaluable on daily patient rounds and should be quickly available for patient management, 19th edition, 2012.*

Reading Text (Required):
Daniel Bernstein, Steven Shelov *Pediatrics for Medical Students*, 3rd edition Lippincott Williams and Wilkins 2012:

Reference Text (Suggested):

ASSIGNMENTS

1. CLIPP Cases: 27 CLIPP cases at [www.med-u.org](http://www.med-u.org)* (cases 5-12, & 14-32) REQUIRED
   *CLIPP Cases must be completed by the last day of the rotation, no exceptions.*

2. Diagnosing Otitis Media and Cerumen removal [http://www.nejm.org/doi/full/10.1056/NEJMvcm0904397](http://www.nejm.org/doi/full/10.1056/NEJMvcm0904397) (other videos that may be of use during this or other pediatric rotations from the NEJM can be viewed at: [http://www.nejm.org/multimedia/medical-videos#qs=%3Fsort%3Dscore%26description%3Dvideosinclinicalmedicine%26searchType%3Dfigure%26topic%3D4](http://www.nejm.org/multimedia/medical-videos#qs=%3Fsort%3Dscore%26description%3Dvideosinclinicalmedicine%26searchType%3Dfigure%26topic%3D4)

3. CORE Cases, also at [www.med-u.org](http://www.med-u.org) (cases 11 and 12 Pediatric Radiology A and B) are recommended


Des Moines University Division of Pediatrics requires the completion of the NBOME-COMAT pediatric subject examination with a passing standard score of 80 or greater. The NBOME-COMAT pediatric exam is a web-based exam administered by the NBOME. This exam is accessed via the NBOME website consists of 125 test items, with a 2.5 hour time limit and a 5 minute tutorial prior to starting the exam. A DMU approved proctor at your rotation site must proctor your exam. This exam will provide the student an opportunity to be informed of his or her progress nationally. The pediatric examination must be taken on the Thursday or Friday of the last week of the required pediatric rotation. However, if this is not possible, you must contact the department via phone or email for consideration of an extension in completing this exam.

This examination is based on the objectives in this syllabus, the material learned in the CLIPP cases, and the lectures delivered during the first two years of classroom, laboratory and simulation experiences that each student has completed prior to beginning the clerkship. The breakdown of topics for this post rotation exam can be found at the following link http://www.nbome.org/comat-pd.asp. The post rotation exam should be arranged, by the student, through the DMU Pediatric Division and the approved DMU proctor at the site. This exam will provide the student an opportunity to be informed of his or her progress in the clerkship.

A remediation COMAT exam will be available to those not receiving the standard score of 80 or above on the initial exam. The pediatric retake exam is to be taken within two-weeks of the exam failure email notification.

Those failing the retake by not receiving a standard score of 80 or above will be required to complete an oral examination with at least two members of the DMU Faculty. The student will be notified by the Pediatric Division Academic Assistant once the grades are received. If there is a failure of this exam the Pediatric Academic Assistant will schedule a Pediatric Oral Examination.

The oral exam will be video-taped/recorded with two DMU faculty members and cover material provided by the pediatric division. The student will be required to answer the questions practically, clinically and specifically on both medical knowledge and application. The final exam grade will be determined by the Division of Pediatrics at the completion of the oral examination. For any passing score on the retake exam or oral exam, a standard score of 80 will be reported to the office of Clinical Affairs.

The student is responsible for making all arrangements including: scheduling of the exam time with the Division of Pediatrics, scheduling time away from their rotation that they are presently on, and all travel arrangements and expenses.

Failure to complete the required examinations within the specified time period will result in failure of the rotation.