I. Rotation Description

Pediatrics is the medical specialty focused on the health and care of children from infancy to adolescence. Pediatrics embraces preventive health including careful observation of the growth and development of a child, anticipatory guidance about safety specific to each age, and acute and chronic care for neonates, infants, children and adolescents in all areas of medical specialties. Pediatricians are passionate advocates for their patients and are intimately involved in the care of the entire family by facilitating and coordinating services for the child. Pediatricians are a diverse group of physicians working in a variety of practice settings, medical subspecialties and geographical regions. The practice of pediatric medicine occurs in the outpatient office setting, in the inpatient setting caring for both acute and chronic illnesses, in the delivery
room and newborn nursery caring for neonates in the first days of life and in the emergency room. Students should review their specific site instructions for a more detailed description of their specific practice setting and be prepared to have a schedule that may include overnight call, early mornings, late evenings and some weekend responsibilities.

The Department of Pediatrics wishes to provide an exciting unique experience for the clinical student while developing competent and compassionate student physicians capable of caring for this extraordinary group of patients.

During the third year pediatrics rotation, students expand their knowledge of Pediatric Medicine and gain the ability to apply this knowledge in the clinical setting. The curriculum is delivered through VCOM TV on-line lectures, case modules and through one-on-one student-preceptor experience in caring for patients in the clinical setting. Students are expected to complete their assignments for both pediatric medicine and the longitudinal OMM course.

II. Course Goals and Objectives

A. Goals of the Course

1. Demonstrate an ability to provide age-appropriate anticipatory guidance about nutrition, behavior, immunizations, injury prevention, pubertal development, sexuality and substance use and abuse.
2. Learn to measure and assess growth including height/length, weight, head circumference and body mass index using standard growth charts in the context of well child examination or a child with a known disorder.
3. Demonstrate ability to assess psychosocial, language, physical maturation, and motor development in pediatric patients.
4. Be able to provide nutrition advice to families with neonates, infants, toddlers, school age children and adolescents.
5. Interview and conduct a physical exam on an adolescent demonstrating respect for privacy, asking sensitive questions about lifestyle choices and giving appropriate counseling.
6. Perform a complete physical examination of the newborn infant.
7. Become familiar with both common genetic and non-genetic congenital disorders and genetic disorders presenting later in childhood.
8. Learn to consider the age, physical growth, developmental stage and family environment when assessing a pediatric patient with an acute illness and constructing a differential diagnosis and therapeutic plan for each problem identified.
9. Understand the long term medical needs, implications and complications of a pediatric patient with a chronic illness or disability.
10. Demonstrate skills necessary to calculate a drug dose, write a medication prescription, and calculate intravenous fluid requirements for a pediatric patient.

B. Clinical Performance Objectives

While the end-of-rotation exam is derived from the didactic curriculum and objectives described above in the “Clinical Modules – Required Curriculum” section, the end-of-rotation evaluation completed by your preceptor is based on clinical core competencies. These core competencies reflect student performance in 6 key areas: communication, problem solving, clinical skills, medical knowledge, osteopathic medicine and professional and ethical considerations. Your end-of-rotation evaluation from your preceptor will be based directly on your performance in these 6 core competencies as described below.

1. Communication - the student should demonstrate the following clinical communication skills:
   a. Effective listening to patient, family, peers, and healthcare team
b. Demonstrates compassion and respect in patient communications
c. Effective investigation of chief complaint, medical and psychosocial history specific to the rotation
d. Considers whole patient: social, spiritual & cultural concerns
e. Efficiently prioritizes essential from non-essential information
f. Assures patient understands instructions, consents & medications
g. Presents cases in an accurate, concise, well organized manner

2. Problem Solving – the student should demonstrate the following problem-solving skills:
   a. Identify important questions and separate data in organized fashion organizing positives & negatives
   b. Discern major from minor patient problems
   c. Formulate a differential while identifying the most common diagnoses
   d. Identify indications for & apply findings from the most common radiographic and diagnostic tests
   e. Identify correct management plan considering contraindications & interaction

3. Clinical Skills - the student should demonstrate the following problem-solving skills:
   a. Assesses vital signs & triage patient according to degree of illness
   b. Perform good auscultatory, palpatory & visual skills
   c. Perform a thorough physical exam pertinent to the rotation

4. Osteopathic Manipulative Medicine - the student should demonstrate the following skills in regards to osteopathic manipulative medicine
   a. Apply osteopathic manipulative medicine successfully when appropriate
   b. Perform and document a thorough musculoskeletal exam
   c. Utilize palpatory skills to accurately discern physical changes that occur with various clinical disorders
   d. Apply osteopathic manipulative treatments successfully

5. Medical Knowledge – the student should demonstrate the following in regards to medical knowledge
   a. Identify & correlate anatomy, pathology and pathophysiology related to most disease processes
   b. Demonstrate characteristics of a self-motivated learner including demonstrating interest and enthusiasm about patient cases and research of the literature
   c. Are thorough & knowledgeable in researching evidence-based literature
   d. Actively seek feedback from preceptor on areas for improvement
   e. Correlate symptoms & signs with most common disease

6. Professional and Ethical Behaviors - the student should demonstrate the following professional and ethical behaviors and skills:
   a. Is dutiful, arrives on time & stays until all tasks are complete
   b. Consistently follows through on patient care responsibilities
   c. Accepts & readily responds to feedback, is not resistant to advice
   d. Assures professionalism in relationships with patients, staff, & peers
   e. Displays integrity & honesty in medical ability and documentation
   f. Acknowledges errors, seeks to correct errors appropriately
   g. Is well prepared for and seeks to provide high quality patient care
   h. Identifies the importance to care for underserved populations in a non-judgmental & altruistic manner
III. Rotation Design

A. Educational Modules
Educational modules using lectures, cases, and other forms of delivery are used for third year curriculum. Each student must complete a post-rotation exam to assure that the expected basic content or medical knowledge has been acquired during the rotation. In addition to the experiences received in the clinical training sites, students are expected to read the content of the assigned textbooks and online materials in order to complete the entire curriculum assigned for the clinical module.

B. Formative Evaluation
Student competency-based rating forms are used by the preceptor to evaluate each student’s clinical skills and the application of medical knowledge in the clinical setting. These forms are only completed by the clinical faculty member or preceptor. Performance on rotations will be evaluated by the primary clinical faculty member precepting the student. VCOM uses a competency-based evaluation form which includes the osteopathic core competencies. These competencies evaluated include:

a. Medical knowledge;
b. Communication;
c. Physical exam skills;
d. Problem solving and clinical decision making;
e. Professionalism and ethics;
f. Osteopathic specific competencies; and
g. Additional VCOM values.

Student competency is judged on clinical skill performance. Each skill is rated as to how often the student performs the skill appropriately (i.e. unacceptable, below expectation, meets expectation, above expectation, exceptional).

C. Logging Patient Encounters and Procedures
Students are required to maintain a log to identify the procedures performed and the number of essential patient encounters in the CREDO application. All students must review these logs with their preceptors prior to the end of the rotation period, as required by the final preceptor evaluation form. Students are encouraged to periodically review their CREDO entries with their preceptor during the rotation period.

IV. Credits
5 credit hours

V. Course Texts
A. Required Textbooks

B. Recommended Textbooks

VI. Course Grading and Requirements for Successful Completion

A. Requirements
   • Attendance according to VCOM and preceptor requirements as defined in the College Catalog and Student Handbook.
Completion and submission of the clinical curriculum
  o In addition to the learning experience in the clinical site, the clinical curriculum consists of the reading assignments and learning objectives that are included in this syllabus and clinical case modules that are derived from some, but not all, of the learning objectives. Student’s success as a physician will depend upon the learning skills they develop during this core rotation, as guided by this syllabus and clinical case modules. National boards, residency in-training examinations, and specialty board examinations require ever increasing sophistication in student’s ability to apply and manipulate medical knowledge to the clinical context.

The clinical case modules were developed by VCOM Discipline Chairs and are intended to provide an OMS 3 student with a clinical, patient-centered approach to the learning content of this rotation. The modules should not be approached as rote learning, but should provide structured, clinically-focused learning from the evidence base for this rotation. The clinical case modules must be submitted in Canvas by no later than 5 PM on the day of your end of rotation exam at: https://canvas.vcom.edu/login/ldap. Failure to do so will result in a deduction of 5 points from your end-of-rotation exam score.

The content of the end-of-rotation exams will be based upon the learning objectives and reading assignments in this syllabus and the clinical case modules and their associated references.

Logging Patient Encounters and Procedures in CREDO:
  o Students are required to log all patient encounter diagnoses and procedures into the CREDO application. A minimum of 100 entries is required for each rotation and students must log the minimum number of entries in order for the preceptor to sign off on the log. All students must review these logs with their preceptors prior to the end of the rotation period, as required by the final preceptor evaluation form. Students are encouraged to periodically review their CREDO entries with their preceptor during the rotation period. These reviews should stimulate discussions about cases and learning objectives, as well as identify curriculum areas the student may still need to complete. If the rotation does not provide enough patient encounters/procedures to reach the minimum entry requirement, the student may request a waiver from the Associate Dean for Clinical Affairs. CREDO logs are due no later than 5 PM on the day of your end of rotation exam. CREDO can be accessed at: https://credo.education/

Rotation Evaluations:
  o Student Site Evaluation: Students must complete and submit at the end of rotation. See the VCOM website at: https://intranet.vcom.edu/clinical to access the evaluation form.
  o Third-Year Preceptor Evaluation: It is the student's responsibility to ensure that all clinical evaluation forms are completed and submitted online or turned in to the Site Coordinator or the Clinical Affairs Office at the completion of each rotation. Students should inform the Clinical Affairs Office of any difficulty in obtaining an evaluation by the preceptor at the end of that rotation. See the VCOM website at: https://www.vcom.edu/academics/clinical-education-third-year/forms to access the evaluation form.
  o Mid-Rotation Evaluation: The mid-rotation evaluation form is not required but highly recommended. See the VCOM website at: https://www.vcom.edu/academics/clinical-education-third-year/forms to access the mid-rotation evaluation form.
• Successful completion of the end-of-rotation written exam. The end-of-rotation exam questions will be derived directly from the specific objectives presented in each of the below modules.

B. Grading
Students must pass both the "module" and "rotation" portions of the course. All rotations have a clinical rotation grade and clinical modules/exam grade. Failure to submit all of the pediatric case module files using the Canvas link provided above by no later than 5 PM on the day of your end of rotation exam will result in a deduction of 5 points from your end-of-rotation exam score. CREDO logs are due no later than 5 PM on the day of your end of rotation exam.

<table>
<thead>
<tr>
<th>OMS 3 End-of-Rotation Exam Grades</th>
<th>OMS 3 AND OMS 4 Clinical Rotation Grades</th>
<th>Other Grades</th>
</tr>
</thead>
<tbody>
<tr>
<td>A 90-100</td>
<td>H Honors</td>
<td>IP In Progress</td>
</tr>
<tr>
<td>B+ 85-89</td>
<td>HP High Pass</td>
<td>INC Incomplete</td>
</tr>
<tr>
<td>B 80-84</td>
<td>P Pass</td>
<td>CP Conditional Pass</td>
</tr>
<tr>
<td>C+ 75-79</td>
<td>F Fail</td>
<td>R Repeat</td>
</tr>
<tr>
<td>C 70-74</td>
<td>Au Audit</td>
<td></td>
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<tr>
<td>F &lt;70</td>
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</tbody>
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C. Remediation
Students who fail one or more rotations or one or more end-of-rotation exams twice will be referred to the Promotion Board. If a student fails the professionalism and ethics portion of the evaluation he or she may be removed from the rotation and referred to the Professionalism and Ethics Standards Board. No grade will be changed unless the Office of Clinical Affairs certifies to the Registrar, in writing, that an error occurred or that the remediation results in a grade change.

• Failure of an End-of-Rotation Exam
Students must pass each end of rotation exam with a C (70%) or better to receive a passing grade for the clinical medical knowledge module. Students who fail an end of rotation exam but pass the clinical rotation evaluation component have a second opportunity to pass the exam within 28 days of notification. If the student passes the remediation exam, the remediated exam grade will be the grade recorded on the transcript and be GPA accountable. If the student fails the end of rotation exam a second time, the student will receive an “F” grade for the rotation and will be brought before the Promotion Board. If the student is allowed to repeat the rotation, all components of the rotation must be repeated. In this case, the “F” grade remains the permanent grade for the initial rotation and the student will receive a new grade for the repeated rotation. The grade will be recorded in a manner that designates that it is a repeated rotation (eg. R-pass).

• Failure of a Rotation
If a student fails the clinical rotation evaluation the student will receive an “F” grade for the rotation and will be brought before the Promotion Board. If the student is allowed to repeat the rotation, all components of the rotation must be repeated. In this case, the “F” grade remains the permanent grade for the initial rotation and the student will receive a new grade for the repeated rotation. The grade will be recorded in a manner that designates that it is a repeated rotation (eg. R-pass).
• **Failure to Make Academic Progress**
Repeated poor a failing performance in a specific competency area on the evaluation form across more than one rotation may also be a reason for a required remediation at the discretion of the Associate Dean for Clinical Affairs in consultation with the clinical chair, the preceptor, and the Promotion Board. In general, rotations should show a progression of improvement in clinical performance. Those students who receive a mere “Pass” on multiple rotations and/or maintain a “CP” on one or more rotations after final grades are received, will be counseled about overall performance and may be required to complete an additional rotation at the end of the year. Any additional curriculum or required remediation will be based on the performance measure. In general, rotations should show a progression of improvement in performance. Those students who continually score in the "unsatisfactory" category or repeated "performs some of the time, but needs improvement" consistently and do not improve over time or who fail one or more rotations may be deemed as not making academic progress and, as a result, may be referred to the Promotion Board and be required to complete additional curriculum. Multiple rotation failures may result in dismissal.

Poor ratings on the clinical rotation evaluation in the professional and ethical areas of the assessment are addressed by the Associate Dean for Clinical Affairs. The Associate Dean may design a remediation appropriate to correct the behavior or if needed may refer the student to the Professionalism and Ethics Board. In the case of repeated concerns in a professional and/or ethical area, the Associate Dean for Clinical Affairs may refer the student to the Campus Dean for a Behavioral Board or Promotion Board hearing. The Campus Dean will act upon this referral depending on the severity and the area of the performance measure. Poor ratings in this area will include comments as to the exact nature of the rating. Repeated poor a failing performance in a specific competency area on the evaluation form across more than one rotation may also be a reason for a required remediation at the discretion of the Associate Dean for Clinical Affairs in consultation with the clinical chair and the preceptor, and the Promotion Board. In general, rotations should show a progression of improvement in clinical performance.

VII. **Academic Expectations**
Grading policies, academic progress, and graduation requirements may be found in the [College Catalog and Student Handbook](#).

A. **Attendance**
Attendance for all clinical rotation days is mandatory. The clinical site will determine the assigned days and hours to be worked within the rotation period. Students are required to attend any orientation the clinical site sets as mandatory prior to any rotation or the clinical year. The orientation sessions vary by site and are required to maintain assignment to the site. Although the clinical site determines the assigned days and hours to be worked, VCOM has established the following guidelines:

- 4 week rotations may not be less than 20, eight hour days for a total of a minimum of 160 hours and often average 180 hours or greater.
  - Students may be required to work up to 24 days in a 4-week period or 25 days in a 1-month rotation, including call and weekends at the discretion of the clinical site.
  - If the clinical site requires longer daily hours or shift work, the student may complete the required hours in less than 20 days with the following specifications:
    - Students should not work greater than an average of 12 out of every 14 days
    - Student should not work more than 12 hours daily, exclusive of on-call assignments.
    - If on-call hours are required, the student should not be on duty for greater than 30 continuous hours.
    - Students may be required to work weekends but in general should have 2 weekends per month free and an average of 2 of 7 days per week free.
It should be noted that preceptors will have final determination of the distribution of hours, which may vary from this policy but should not in general be less than 160 hours for a 4 week rotation. The institution’s DSME and assigned clinical faculty determine clinical duty hours. Students are responsible to the assigned clinical faculty and are expected to comply with the general rules and regulations established by the assigned clinical faculty, and/or the core hospital(s), or facility associated with the rotation.

The average student clinical day begins at 7 am and ends at 7 pm. Students are expected to work if their assigned clinical faculty is working. Some rotations assign students to shifts and in such cases the student may be required to work evening or night hours. If on-call hours are required, the student must take the call; however, the student should not be on duty for greater than 30 continuous hours. Students may be required to work weekends, but in general should have two weekends per month free and two of seven days per week free. Student holidays are determined by the clinical site and follow those of other students and/or residents from the clinical site. Students must be prompt and on time for the clinical rotation.

Students are expected to arrive on time to all clinical rotations. If a student is late, he or she must notify the site coordinator and the preceptor prior to or at the time they are scheduled to arrive. Students must have a reason for being late such as illness or vehicle issues and it is not anticipated that this would occur more than one occasion AND it is important the student call in prior to being late. Repeated tardiness is considered as unprofessional behavior and is a reason for dismissal from a rotation. Students with repeated tardiness will be referred to the PESB. Tardiness is defined as more than 5 minutes after the scheduled time the preceptor designates as the expected arrival time.

The Office of Clinical Affairs requires that the medical student complete and submit an Excused Absence Clinical Rotations Approval form for any time "away" from clinical rotations. Forms are available at: https://www.vcom.edu/academics/clinical-education-third-year/forms. The student must have this form signed by their preceptor and others designated on the form to obtain an excused absence and must be provided to the DSME and the Office of Clinical Affairs through the site coordinator. The form must be completed prior to the beginning of the leave. If an emergency does not allow the student to submit this prior to the absence, the “Excused Absence Clinical Rotations Approval” form must be submitted as soon as the student is physically able to complete the form. In addition to completion of the form, students must contact the Department of Clinical Affairs, the Site Coordinator, and the preceptor’s office by 8:30 AM of the day they will be absent due to an illness or emergency. No excused absence will be granted after the fact, except in emergencies as verified by the Associate Dean for Clinical Affairs.

Regardless of an excused absence, students must still complete a minimum of 160 hours for a 4 week rotation in order to pass the rotation. Any time missed must be remediated during the course of the rotation for credit to be issued. Students may remediate up to four missed days or 48 hours missed during any rotation period by working on normal days off. OMS 3 students who have any unexcused absences will be referred to the PESB.

B. Prohibited Use of External Accelerators
At times, there may be lectures on VCOMTV where completion will be documented as part of passing the course (these will be clearly indicated in the course syllabus). For these lectures, the use of an external accelerator is prohibited, as VCOMTV is unable to track completion through these programs. If a student uses an external accelerator for these assignments, they will be required to re-watch the lecture(s) in VCOMTV within the required timeline. Failure to document a student’s completion of these assignments within the required timeline due to use of an external accelerator may result in failure of the course.
VIII. Professionalism and Ethics
It is advised that students review and adhere to all behavioral policies including attendance, plagiarism, dress code, and other aspects of professionalism. Behavioral policies may be found in the College Catalog and Student Handbook.

A. VCOM Honor Code
The VCOM Honor Code is based on the fundamental belief that every student is worthy of trust and that trusting a student is an integral component in making them worthy of trust. Consistent with honor code policy, by beginning this exam, I certify that I have neither given nor received any unauthorized assistance on this assignment, where “unauthorized assistance” is as defined by the Honor Code Committee. By beginning and submitting this exam, I am confirming adherence to the VCOM Honor Code. A full description of the VCOM Honor Code can be found in the College Catalog and Student Handbook.

IX. Syllabus and Rotation Schedule
Please use this syllabus as a guide, paying particular attention to the learning objectives as an outline of what you are expected to know for each topic/module. Refer to the rotation calendar for specific dates of exams.

The faculty of the course will make every effort to adhere to the syllabus and rotation schedule; however, the Office of Clinical Affairs reserves the right to make changes to the syllabus; including changes to examinations, quizzes, modules, homework or other assignments; and/or the schedule with as much advance notice as possible. These changes will be communicated to the students in writing via Canvas or email.

X. Clinical Curriculum
In addition to the topics below with reading references and learning objectives, students must also complete the assigned clinical cases. The content of the end-of-rotation exams will be based upon the learning objectives and reading assignments in this syllabus and the clinical case modules and their associated references. The clinical case modules must be submitted in Canvas at: https://canvas.vcom.edu/login/ldap

1. Newborn Exam (male and female) and Newborn Care; Newborn Nutrition, Disorders in the Newborn
Optional Resources:
   • http://www.medcalc.com/ballard.html
   • Newborn Conditions and Pearls: Newborn Exam
Module: Newborn Exam and Newborn Care
Learning Objectives:
   A. Recall the effects of maternal health, medications, and substances abuse on the fetus and child:
      I. Maternal age
      II. Diabetes
      III. Hypertension
      IV. Alcohol consumption
      V. Smoking
      VI. Illicit drug use
      VII. Prescription medication use (phenytoin, valproate, retinoic acid)
      VIII. Previous history of stillbirth, fetal loss, or early neonatal death
   B. Recall the factors in the perinatal and newborn history that may put a neonate at risk for medical problems:
      I. Fetal conditions
         a. Prematurity
b. Postmaturity  
c. Congenital anomalies  
d. Intrauterine growth restriction  
e. Multiple gestations  

II. Antepartum complications  
  a. Placental anomalies  
    i. Previa  
    ii. Abruption  
  b. Abnormal amniotic fluid levels  
    i. Oligohydramnios  
    ii. Polyhydramnios  

III. Delivery complications  
  a. Transverse lie or breech presentation  
  b. Chorioamnionitis  
  c. Meconium-stained amniotic fluid  
  d. Antenatal asphyxia with abnormal fetal heart rate pattern  
  e. Maternal administration of a narcotic within four hours of birth  
  f. Deliveries that require instruments such as vacuum or forceps  
  g. Cesarean delivery for maternal or fetal compromise  

C. Explain the transition from the intrauterine to the extrauterine environment:  
   I. Temperature regulation  
   II. Cardiovascular and respiratory systems  
   III. Glucose regulation  
   IV. Initiation of feeding  

D. Apply the APGAR scoring system to newborn care and need for resuscitation.  

E. Explain the key concepts used in the clinical evaluation of gestational age (Ballard score).  

F. Recall how gestational age and weight affect risks of morbidity or mortality in the newborn period:  
   I. Need for respiratory assistance/lung disease  
   II. Temperature regulation  
   III. Ability to feed and glucose homeostasis  

G. Explain the key components of the routine newborn exam.  

H. Explain the underlying pathology and management of the following exam findings:  
   I. Absence of the red reflex  
   II. Ear pit and/or tag  
   III. Epstein Pearl  
   IV. Heart murmur (Patent ductus arteriosus)  
   V. Hemangioma  
   VI. Scalp swelling  
   VII. Newborn rash  
   VIII. Positive Ortolani and/or Barlow  
   IX. Sacral dimple  
   X. Slate grey patch  

I. Explain the pathophysiology, differential diagnosis, screening, and management for the following newborn concerns:  
   I. Prematurity  
   II. Small for gestational age  
   III. Large for gestational age  
   IV. Respiratory distress  
   V. Poor feeding  
   VI. Hypoglycemia  
   VII. Hyperbilirubinemia
VIII. Sepsis
IX. Neonatal TORCH infections
X. Drug exposure and neonatal abstinence syndrome

J. Explain the key components of routine newborn care.
   I. Recall the routine newborn medications and rationale for these medications:
      a. Vitamin K
      b. Eye prophylaxis
      c. Hepatitis B vaccination
   II. Recall the standard components of newborn screening and the purpose of each test:
      a. Newborn screening
      b. Hearing screening
      c. Pulse oximetry
   III. Recall the common medical and metabolic disorders detected through the blood spot newborn screening test and explain their management.
      a. Congenital Adrenal Hyperplasia
      b. Cystic Fibrosis
      c. Galactosemia
      d. Hemoglobinopathies
      e. Hypothyroidism
      f. Phenylketonuria
      g. Sickle Cell Disease
   IV. Explain anticipatory guidance specific to the newborn.
      a. Breastfeeding
         i. Recall the advantages of breastfeeding for both mother and baby.
         ii. Recall the common difficulties experienced by breastfeeding mothers.
         iii. List the recognized contraindications of breastfeeding in the United States.
      b. Normal sleep patterns
      c. Appropriate car seat use
      d. Prevention of SIDS and SUID
      e. The role of circumcision

2. Prevention, Health Promotion, Nutrition, and Health Maintenance Visits


Optional Resources:
  • www.cdc.gov/vaccines/schedules/hcp/child-adolescent.html#printable
  • https://agesandstages.com/
  • https://www.healthychildren.org/English/safety-prevention/on-the-go/Pages/Car-Safety-Seats-Information-for-Families.aspx

Module: Prevention, Health Promotion, Nutrition, and Health Maintenance

Learning Objectives:
A. Recall the components of a health supervision visit for newborns, infants, toddlers, school aged children, and adolescents:
   I. Growth
      a. Understand the use of growth charts in assessing and determining patterns of growth.
      b. Explain normal growth patterns in neonates, infant, children, and adolescents.
         i. Constitutional delay
         ii. Familial short stature
d. Identify abnormal patterns of growth.
   i. Failure to thrive
      a) Define Failure to Thrive (FTT) and distinguish between the
         inorganic and organic causes of FTT.
      b) Explain the nutritional factors that contribute to failure to
         thrive.
   ii. Identify the clinical presentation and medical management of
       Kwashiorkor and Marasmus.
   iii. Identify the clinical presentation, medical management and associated
        morbidities with eating disorders:
        a) Anorexia
        b) Bulimia
   iv. Understand the underlying physiology and analyze the electrolyte
       derangement noted with refeeding syndrome.
   v. Overweight/obesity
      a) Explain the nutritional factors that contribute.
      b) Recall the endocrine, cardiovascular and orthopedic
         consequences.
      c) Explain the risk factors for the development of
         cardiovascular disease and diabetes in children.

B. Nutrition
   I. Explain the AAP guidelines for the following supplements for neonates and
      children:
      a. Vitamin D
      b. Fluoride
   II. Know the prevention, signs, symptoms, and medical management of common
        nutritional deficiencies in infants and children:
      a. Fluoride
      b. Iron
      c. Vitamin B
      d. Vitamin B12
      e. Vitamin C
      f. Vitamin D
      g. Niacin
      h. Zinc

C. Disease and injury prevention
   I. Recall the most common preventable morbidities in childhood and explain strategies
      for prevention:
      a. Accidental discharge of a firearm
      b. Bicycle accidents
      c. Burns
      d. Drowning
      e. Firework injuries
      f. House fire
      g. Ingestions
      h. Motor vehicle collisions
      i. Pedestrian injuries
      j. Recreational vehicle accidents
      k. Trampoline related injuries
      l. Skating and skateboarding
      m. Boating
II. Recall how risk of illness and injury changes during growth and development and identify examples of the age-and development-related illnesses and injuries.

D. Recall the indications, appropriate use, interpretation, and limitations of the following screening tools and tests:
   I. Anemia screening/CBC
   II. Developmental screening
      a. ASQ
      b. Denver
      c. MCHAT
   III. Environmental lead questionnaire and blood lead level
   IV. Hearing screening
   V. Tuberculosis testing
   VI. Urinalysis
   VII. Vision Screening

E. Immunizations
   I. Explain the rationale for childhood immunizations.
   II. Explain the limited contraindications to childhood immunizations.
   III. Recall the immunizations currently recommended from birth through adolescence.
   IV. Distinguish a child with delayed immunization and explain catch-up immunization.

F. Define anticipatory guidance and explain how it changes based on the age of the child.

G. Recall the common mental health and behavioral problems in different age groups, explain the necessary evaluation, treatment options, and anticipatory guidance relevant to the topic.
   I. Newborns/Infant
      a. Colic
      b. Sleep problems
   II. Toddler
      a. Autism spectrum disorders
      b. Temper tantrums
      c. Toilet training
      d. Picky eating
      e. Speech delay
   III. School age
      a. Anxiety
      b. Attention Deficit Hyperactivity Disorder
      c. Conduct Disorder
      d. Encopresis
      e. Enuresis
      f. Learning Disabilities
      g. Oppositional Defiant Disorder
      h. Tic Disorder
   IV. Adolescents
      a. Body image and disordered eating
      b. Depression and suicide
      c. Mood disorders
      d. Risk taking behaviors
      e. School failure
      f. Substance abuse

H. Adolescent health maintenance:
   I. Explain the unique features of the physician-patient relationship during adolescence including confidentiality and consent.
   II. Explain the characteristics of early, mid, and late adolescents in terms of cognitive and psychosocial development.
III. Explain methods to obtain a thorough social history in an adolescent (HEADSS).

IV. Anticipatory guidance and health promotion
   a. Recall the common risk-taking behaviors of adolescents and explain the consequences of these activities:
      i. Substance abuse
      ii. Sexual activity
      iii. Violence
   b. Explain the contributions of unintentional injuries, homicide and suicide to the morbidity and mortality of adolescents.

I. Specify the key components of a pre-participation sports physical.
J. Recall the developmental stages associated with emerging gender identity and sexual orientation.
K. Identify issues faced by the GLBTQ youth.
   I. Explain ways health care providers can promote acceptance and respect of all patients regardless of their gender identity and/or sexual orientation.

L. Common chronic illnesses and disabilities:
   I. Identify the unique difficulties encountered by pediatric patients with chronic diseases, including adherence, and issues of autonomy vs dependence.
   II. Identify unique features of children with chronic medical conditions and special needs that should be addressed during health supervision visits.
      b. Ability to perform activities of daily living and need for specialized equipment or services:
         i. Educational services
         ii. Feeding supplies
         iii. Mobility aids
         iv. Toileting needs
         v. Therapy services
         vi. Multidisciplinary approach

3. Developmental, Dysmorphology & Genetics

   Reading Assignment: Nelson Essentials of Pediatrics, 8th Edition, Chapters 7, 8, & 47-50

   Optional Resources:
   • Zitelli and Davis’ Atlas of Pediatric Physical Diagnosis, Pages 13-17, 30, & 369

Module: Developmental, Dysmorphology & Genetics

Learning Objectives:
A. Recall and define the five developmental domains of childhood as per the Ages and Stages Questionnaire:
   I. Gross motor
   II. Fine motor
   III. Language
   IV. Personal-social development
   V. Problem solving

B. Recall the critical developmental milestones in infants, toddlers and school age children.
C. Explain normal patterns of behavior in the developing child.
   I. Birth - 2 years
      a. Sensorimotor stage
      b. Development of social skills
      c. Object permanence and function
      d. Representational play
      e. Newborn dependence to toddler autonomy
   II. 2 - 7 years
      a. Preoperational stage
b. Independence

c. Imagination

d. Symbolic Play

III. 7-11 years
   a. Concrete operational stage
   b. Logical thinking

IV. >11 years
   a. Formal operational stage
   b. Abstract thinking

V. List the appropriate interventions needed for developmental delays identified during routine well child visits.

VI. Recall the genetic basis, clinical manifestations, morbidities and long term sequelae of the following disorders:
   a. Angelman Syndrome
   b. Autosomal trisomy (trisomy 21, trisomy 18, trisomy 13)
   c. Chromosome 22Q11 Deletion Syndrome
   d. Fetal Alcohol Syndrome
   e. Fragile X
   f. Klinefelter Syndrome
   g. Pierre Robin Sequence
   h. Prader-Willi Syndrome
   i. Treacher Collins Syndrome
   j. Turner Syndrome
   k. Williams Syndrome
   l. Beckweith-Wiedemann Syndrome

4. **Neurological Disorders, Seizures, and Epilepsy**

Reading Assignment: Nelson Essentials of Pediatrics, 8th Editions, Chapters 10, & 179-187

Module: [Neurological Disorders, Seizures, and Epilepsy](#)

Learning Objectives:

A. Recall the differential diagnosis and clinical approach for the following symptoms and exam findings in children/neonates:
   I. Headache
   II. Lethargy/irritability
   III. First onset seizure

B. Explain the evaluation, workup and treatment of a febrile seizure.

C. Recall the classification of seizures as per the ILEA guidelines, clinical presentations, and classic EEG findings of each:
   I. Level 1: Seizure Type
      a. Generalized
         i. Motor
         ii. Nonmotor (absence)
      b. Focal
         i. Level of Awareness
         ii. Description area affected
            a) Cognitive
            b) Emotional or affective
            c) Autonomic
            d) Automatisms
            e) Motor
            f) Sensory
            g) Laterality
h) Unknown

II. Level 2: Epilepsy Based on Seizure Type
   a. Generalized
   b. Focal
   c. Combined generalized and focal
   d. Unknown if generalized or focal

III. Level 3: Epilepsy Syndrome
   a. West Syndrome (Infantile Spasms)
   b. Benign epilepsy with centrotemporal spikes (Benign Rolandic Epilepsy)
   c. Lennox-Gastaut Syndrome
   d. Childhood absence epilepsy
   e. Juvenile myoclonic epilepsy

IV. Level 4: Epilepsy with Etiology
   a. Etiologies
      i. Genetic
      ii. Structural
      iii. Metabolic
      iv. Immune
      v. Infectious
      vi. Unknown
   b. Comorbidities

D. Identify the clinical presentation and recall the treatment of status epilepticus.
E. Identify the clinical features of cerebral palsy.

F. Recall the differential diagnosis, clinical presentation and management of the following conditions associated with hypotonia:
   I. Acute Disseminating Encephalomyelitis
   II. Botulism
   III. Duchenne Muscular Dystrophy
   IV. Guillain-Barré Syndrome
   V. Myasthenia Gravis
   VI. Spinal muscular atrophy

G. Recall the etiology, clinical presentation, diagnostic tool and management of the following neurodegenerative disorders:
   I. Krabbe Disease
   II. Hunter Syndrome
   III. Hurler Syndrome
   IV. Rett Syndrome
   V. Tay-Sachs Disease

H. Recall the etiology, clinical presentation, diagnostic tool and management of the following neurocutaneous disorders:
   I. Neurofibromatosis
   II. Sturge Weber Syndrome
   III. Tuberous sclerosis
5. **Ophthalmology, ENT, and Common Minor Infections**

**Reading Assignment:** Nelson Essentials of Pediatrics, 8th Edition, Chapters 102-106, & 133-137

**Module:** Ophthalmology, ENT, and Common Minor Infections

**Learning Objectives:**

A. **EENT**

I. Recall the differential diagnosis for the following symptoms and exam findings:
   a. Red eye
   b. Wandering eye
   c. White pupillary reflex
   d. Rhinorrhea
   e. Otalgia
   f. Sore throat

II. **Otitis Media**

   a. Apply proper techniques and skills to differentiate between a normal tympanic membrane, acute otitis media (AOM) and otitis media with effusion (OME).
   b. Explain management and treatment options for uncomplicated AOM.

III. **Pharyngitis**

   a. Recall the clinical presentation, evaluation, management and the complications of Strep pharyngitis.
   b. Understand the clinical presentation, systematic diagnostic work up, treatment plan for pharyngitis.
   c. Understand the complications and potential sequelae of tonsillar hypertrophy.

IV. **Recall the clinical presentation and management of viral versus bacterial conjunctivitis.**

V. **Identify the clinical presentation and management of nasal and otic foreign body**

VI. **Respiratory infections**

   a. Understand the clinical presentation, systematic diagnostic work up, treatment plan, complications and potential sequelae of the following disorders:
      i. Bronchiolitis
      ii. Pneumonia (viral versus bacterial)
      iii. Pertussis

VII. **Define what is a fever and the differential diagnosis, management and work up for fever of unknown origin based on the age of the child.**

   a. Understand the clinical presentation, systematic diagnostic work up, treatment plan, complications and potential sequelae of the following disorders:
      i. Kawasaki’s Disease
      ii. Meningitis/Encephalitis
      iii. Herpes Simplex Viral infections
      iv. Hand Foot and Mouth Syndrome
      v. Erythema infectiosum
      vi. Varicella
      vii. Measles (Rubeola)
      viii. Roseola (a.k.a Erythema Subitum, Roseola infantum)
      ix. Rubella
6. **Asthma and other Respiratory Disorders**  
**Reading Assignment:** Nelson Essentials of Pediatrics, 8th Edition, Chapters 78, 107, 109, 7 133-138  
**Module:** Asthma and Other Respiratory Disorders  
**Learning Objectives:**  
A. Recall the deferential diagnosis for the following symptoms and exam findings:  
   I. Cough  
   II. Stridor  
   III. Wheezing  
B. Upper Airway Obstruction Disorders  
   I. Identify the underlying etiology, signs, symptoms, diagnostic approach, medical management and sequelae of the following disorders:  
      a. Choanal atresia  
      b. Croup  
      c. Epiglottitis  
      d. Laryngomalacia  
      e. Bacterial tracheitis  
      f. Subglottic stenosis  
      g. Vocal cord paralysis  
C. Lower airway, parenchymal, and chest wall disorders  
   I. Asthma  
      a. Identify the classification and risk factors of asthma based on the history.  
      b. Choose the appropriate treatment modality based on the classification of asthma.  
      c. Compare and contrast the different diagnostic tools for asthma (peak flows, spirometry).  
      d. Interpret the pulmonary function tests of a normal and asthmatic patient.  
      e. Specify the appropriate treatment choice for an asthmatic patient based on clinical presentation.  
      f. Define status asthmaticus and the appropriate treatment and management approach.  
D. Identify the underlying etiology, signs, symptoms, diagnostic approach, medical management and sequelae of the following disorders:  
   I. Cystic Fibrosis  
   II. Tracheomalacia  
   III. Bronchopulmonary Dysplasia  
   IV. Tracheoesophageal fistula  
   V. Primary Ciliary Dyskinesia  
   VI. Pectus excavatum  
   VII. Pectus carinatum  

7. **Congenital Heart Disease**  
**Reading Assignment:** Nelson Essentials of Pediatrics, 8th Edition, Chapters 139-147  
**Optional Resource:** Heart Sounds  
**Module:** Congenital Heart Disease  
**Learning Objectives:**  
A. Recall the differential diagnosis and evaluation for the following symptoms and exam findings:  
   I. Syncope  
   II. Chest pain  
   III. Palpitations  
   IV. Heart murmur  
B. Identify the symptoms of congestive heart failure in an infant and explain the management.
C. Recall the clinical presentation, management, and classic EKG findings of common pediatric dysrhythmias:
   I. Premature atrial beats
   II. Heart block
   III. Long QT Syndrome
   IV. Sinus arrhythmia
   V. Supraventricular tachycardia
   VI. Ventricular premature beats
   VII. Ventricular tachycardia
   VIII. Wolff-Parkinson-White Syndrome

D. Congenital heart disease
   I. Explain acyanotic and cyanotic heart disease.
   II. Recall the pathophysiology and clinical presentation of the following congenital acyanotic heart lesions:
      a. Patent ductus arteriosus
      b. Atrial septal defect
      c. Ventricular septal defect
      d. Coarctation of the aorta
      e. Endocardial cushion defect
   III. Recall the pathophysiology and clinical presentation of the following congenital cyanotic heart lesions:
      a. Truncus arteriosus
      b. Transposition of the great vessels
      c. Tetralogy of Fallot
      d. Tricuspid atresia
      e. Total anomalous pulmonary venous return
      f. Double outlet right ventricle
      g. Hypoplastic left heart
      h. Ebstein’s anomaly
      i. Pulmonary atresia
      j. Persistent pulmonary hypertension
   IV. Recall the first steps in evaluation and treatment of congenital heart disease.
   V. Recall the pharmacology of maintaining an open ductus versus closing the ductus.
   VI. Compare the physiology, clinical presentation and management of dilated, hypertrophic, and restrictive cardiomyopathies.

8. Gastrointestinal Disorders
   Reading Assignment: Nelson Essentials of Pediatrics, 8th Edition, Chapters 126-130
   Module: Gastrointestinal Disorders
   Learning Objectives:
   A. Explain the clinical presentation, differential diagnosis, evaluation, and management of the following symptoms, exam findings, and laboratory results:
      I. Abdominal pain
         a. Acute
         b. Chronic
      II. Vomiting in children of different ages
         a. Bilious
            i. Small bowel obstruction
            ii. Volvulus
         b. Nonbilious
            i. Acute gastroenteritis
            ii. Increased intracranial pressure
iii. Gastro esophageal reflux
iv. Gastroesophageal reflux disease
v. Metabolic derangements
vi. Peptic Ulcer Disease
vii. Pyloric stenosis

III. Diarrhea
   a. Infectious
   b. Noninfectious

IV. Constipation/Encopresis

V. Gastrointestinal bleed
   a. Upper
   b. Lower

VI. Abdominal mass

VII. Hepatitis

VIII. Pancreatitis

B. Explain how to examine a patient with abdominal pain.

C. Recall critical findings ("red flags") that differentiate functional from pathological abdominal pain.

D. Identify the clinical presentation, evaluation, and management for the following gastrointestinal processes:
   I. Appendicitis
   II. Celiac Disease
   III. Duodenal atresia
   IV. Food Protein-Induced Enterocolitis Syndrome
   V. Gastrochisis
   VI. Hirschprung’s Disease
   VII. Inflammatory Bowel Disease
   VIII. Intussusception
   IX. Malrotation
   X. Meconium ileus
   XI. Omphalocele
   XII. Umbilical hernia

9. Fluid and Electrolyte Management

Reading Assignment: Nelson Essentials of Pediatrics, 8th Edition, Chapters 32-33

Module: Fluid and Electrolyte Management

Learning Objectives:

A. Dehydration
   I. Identify clinical manifestations of dehydration and classify it as mild, moderate, or severe based on history and physical exam findings.
   II. List the types of dehydration.
   III. Explain the appropriate rehydration method for each type of type of dehydration.

B. Derive the following based on the child's weight:
   I. Fluid bolus
   II. Volume deficit
   III. Daily maintenance needs
   IV. Impact of ongoing losses

C. Evaluate the causes, signs and symptoms of the following electrolyte derangements:
   I. Hypernatremia
   II. Hyponatremia
   III. Hyperkalemia
      a. Identify classic EKG findings with hyperkalemia.
IV. Hypokalemia
D. List the causes of metabolic acidosis.

10. Nephrology and Urology
Module: Nephrology and Urology
Learning Objectives:
A. Recall the differential diagnosis for the following:
   I. Dysuria
   II. Hypertension
   III. Hematuria
   IV. Proteinuria
   V. Edema
B. Define acute kidney injury (a.k.a acute renal failure) and chronic renal failure, and discuss the associated clinical presentation and management of those conditions in a child.
C. Describe the clinical presentation, diagnosis, and management of rhabdomyolysis in children.
D. Describe the clinical presentation, diagnosis, and management of nephritic syndrome in children.
E. Describe the clinical presentation, diagnosis, and management of hypertension in children.
F. Describe the clinical presentation, diagnosis, and management of nephrotic syndrome in children.
G. Understand the clinical presentation and organize a systematic clinical approach including treatment and management of Hemolytic Uremic Syndrome.
H. Identify the clinical presentation, evaluation, and management of sexually transmitted diseases and pelvic inflammatory disease in adolescents.
I. Determine the clinical presentation, diagnostic approach, and management for the following genitourinary system anomalies:
   I. Posterior urethral valves
   II. Ureteropelvic junction obstruction
   III. Ureterocele
   IV. Vesicoureteral reflux
   V. Hydronephrosis
   VI. Hypospadias
   VII. Recurrent urinary tract infections
   VIII. Testicular torsion
   IX. Phimosis, Paraphimosis
   X. Cryptorchidism
   XI. Inguinal hernia
   XII. Labial adhesions
   XIII. Imperforate hymen

11. Endocrinology
Module: Endocrinology
Learning Objectives:
A. Recall the clinical presentation, evaluation, and management of thyroid disorders in infancy and childhood:
   I. Hypothyroid
   II. Hyperthyroid
B. Compare the clinical presentation, lab findings and management of type I and type II DM.
C. Puberty
I. Explain the sequence of the physical maturation process (Tanner Scales) in both males and females.

II. Recall the clinical presentation, systematic evaluation, and management of precocious puberty in childhood.

III. Recall the clinical presentation, systematic evaluation, and management of delayed puberty in childhood.

D. Recall the clinical presentation, systematic evaluation, and management of the following endocrine disorders:
   I. Adrenal disorders
      a. Congenital Adrenal Hyperplasia (CAH)
      b. Addison’s Disease
      c. Cushing’s Syndrome
   II. Syndrome of Inappropriate Antidiuretic Hormone Secretion (SIADH)
   III. Diabetes Insipidus (DI)

12. Hematology and Oncology


Module: Hematology and Oncology

Learning Objectives:
A. Hematology
   I. Recall the differential diagnosis for the following symptoms, exam findings, and laboratory results:
      a. Petechiae and/or Purpura
      b. Anemia
         i. Microcytic
         ii. Normocytic
         iii. Macrocytic
      c. Leukopenia
      d. Thrombocytopenia
   II. Understand the etiology, clinical presentation, sequelae, diagnostic approach, management and treatment for the following conditions:
      a. Sickle Cell Disease
         i. Sickle Cell Crises
         ii. Acute chest syndrome
         iii. Splenic sequestration
      b. Anemia
      c. Idiopathic Thrombocytopenic Purpura (ITP)
      d. Thrombotic Thrombocytopenic Purpura (TTP)
      e. Henoch Schönlein Purpura
      f. Thalassemia
      g. G6PD deficiency
      h. Hereditary Spherocytosis
   III. Understand the coagulation pathway, clinical presentation, lab findings, and management for the following conditions:
      a. Hemorrhagic disease of the newborn
      b. Factor V Leiden deficiency
      c. Protein C deficiency
      d. Protein S deficiency
      e. Hemophilia
      f. Von Willebrand Disease
      g. Bernard- Soulier Syndrome
B. Oncology
   I. Recall the differential diagnosis for the following common symptoms and exam findings:
      a. Petechiae and/or Purpura
      b. Abdominal mass
      c. Hepatomegaly
      d. Splenomegaly
      e. Lymphadenopathy
   II. Identify the clinical presentation of the common pediatrics cancers, interpret the labs findings and determine best radiologic modality for each of these cancers:
      a. Leukemia
      b. Lymphoma
      c. Neuroblastoma
      d. Wilms tumor
      e. Osteosarcoma
      f. Retinoblastoma
      g. Germ Cell tumors
   III. Explain the evaluation of an abdominal mass in a child.
   IV. Recall the location and manifestations of primary CNS tumors in the pediatric population.
   V. Explain the principles of effectively breaking bad news to a child and to the child’s family.

13. Pediatric Musculoskeletal Disorders
   Module: Pediatric Musculoskeletal Disorders
   Learning Objectives:
   A. List the differential diagnosis for limp:
      I. Developmental
      II. Infectious
      III. Inflammatory
      IV. Metabolic
      V. Neoplastic
      VI. Trauma
   B. Explain the risk factors, clinical presentation and management of developmental dysplasia of the hip.
   C. Identify the typical history, physical exam, and treatment for nursemaid’s elbow.
   D. Explain the process of maturation of the skeletal system and the impact this has on the differential diagnosis of musculoskeletal injuries.
   E. Explain the Salter Harris classification and the associated X-ray findings,
   F. Understand the common types of fractures noted in pediatric patients:
      I. Buckle Fracture
      II. Greenstick Fracture
      III. Complete Fracture
      IV. Bowing fracture
   G. Explain the impact of skeletal immaturity on certain sports such as weightlifting,
   H. Explain the clinical manifestation, diagnostic approach and management of the following orthopedic conditions:
      I. Scoliosis
      II. Kyphosis
      III. Avascular necrosis of the femoral head
      IV. Developmental dysplasia of the hip
V. Legg-Calvé-Perthes Disease
VI. Osgood Schlatter Disease
VII. Severs Disease
VIII. Slipped Capital Femoral Epiphysis
IX. Torticollis
X. Transient synovitis
XI. Septic joint

I. Understand the clinical approach to evaluating a child with hypotonia.

14. Pediatric Dermatology


Module: Pediatric Dermatology

Learning Objectives:
A. Recall the clinical presentation, differential diagnosis, and management of diaper rash.
B. Organize a systematic approach for these clinical signs: café au lait spots, melanocytic nevus, hemangiomas, port wine stains.
C. Recall the key history and physical findings, and organize a systematic approach to treatment of the following common pediatric dermatologic conditions:
   I. Atopic dermatitis/eczema
   II. Contact dermatitis
   III. Seborrheic dermatitis
   IV. Pityriasis rosea
   V. Scabies
   VI. Superficial fungal infections (Skin vs scalp)
   VII. Viral exanthems
   VIII. Impetigo
   IX. Staph Scalded Skin Syndrome
   X. Steven Johnson Syndrome
   XI. Erythema marginatum
   XII. Erythema migrans
   XIII. Erythema Nodosum
   XIV. Erythema multiforme
   XV. Molluscum contagiosum
   XVI. Warts

D. Explain the indications, general approach to selection of strength, and the common side effects associated with topical steroid use.
E. List the causes, clinical presentation and management for these neonatal rashes:
   I. Erythema toxicum
   II. Neonatal Pustulosis
   III. Mongolian spots
   IV. Hemangioma
   V. Milia
   VI. Neonatal acne
15. **Pediatric Allergy, Immunology, & Rheumatology**

**Reading Assignment:** Nelson Essentials of Pediatrics, 8th Edition, Chapters 72-75, 77, 79, 81-82, 84-85, & 88-91

**Module:** Pediatric Allergy, Immunology, & Rheumatology

**Learning Objectives:**

A. **Allergy**
   I. Identify the classification of the different hypersensitivity disorders:
      a. Type I
      b. Type II
      c. Type III
      d. Type IV
   
   II. Determine the appropriate history, physical exam, diagnostic measures and treatment approaches for the following chief complaints:
      a. Hives/Urticaria
      b. Rhinitis
      c. Cough

B. **Immunology**
   I. Understand the clinical presentation, systematic diagnostic work up, and management of each of the following vascular, autoimmune, and rheumatological disorders:
      a. Kawasaki’s Disease
      b. Juvenile Dermatomyositis
      c. Juvenile Idiopathic Arthritis
      d. Scleroderma
      e. Systemic Lupus Erythematosus
   
   II. Understand the clinical presentation, systematic diagnostic work up, and management of each of the following immunodeficiencies:
      a. Antibody Defects
         i. IgA
         ii. IgG
      b. Transient Hypogammaglobulinemia of Infancy
      c. Severe Combined Immunodeficiency
      d. Common Variable Immunodeficiency
      e. Leukocyte Adhesions Deficiency
      f. Chediak-Higashi Syndrome

16. **Child Abuse, Neglect, Child Placement**

**Reading Assignment:** Nelson Essentials of Pediatrics, 8th Edition, Chapters 22, & 24-26

**Module:** Child Abuse, Neglect, Child Placement

**Learning Objectives:**

A. Recall the rationale for screening for social determinants of health (maternal/postpartum depression, poverty, domestic violence).

B. Infer the types of situations were pathology in the family (alcoholism, domestic violence, depression) contributes to childhood health and behavioral disturbances.

C. Recall examples of Adverse Childhood Experiences (ACEs) and explain how ACEs affect adulthood outcomes.

D. Identify the different types of child abuse, associated clinical manifestations, morbidities, treatment and management of the following:
   
   I. Neglect
   II. Physical Abuse
   III. Emotional Abuse
   IV. Verbal Abuse
V. Sexual Abuse
   E. Understand the underlying premise of foster care and adoption policies within the United States.

17. Pediatric Emergencies
   Module: Pediatric Emergencies
   Learning Objectives:
      A. Identify the critically ill child based on history, vital signs, and physical exam findings.
      B. List the appropriate BLS and PALS intervention for a child in cardiopulmonary distress and failure.
      C. Recall the presentation and explain the age appropriate steps in management for each of the following emergencies:
         I. Respiratory Distress and Respiratory Failure
            a. Anaphylaxis
            b. Status Asthmaticus
            c. Bronchiolitis
            d. Foreign body aspiration
            e. Croup
            f. Pneumonia
         II. Altered Mental Status
            a. Child abuse/Violence
            b. Diabetic Ketoacidosis
            c. Head injury
            d. Hypoglycemia
            e. Hypoxemia/Hypoxia
            f. Increased ICP
            g. Shock/SIRS
            h. Substance abuse
            i. Withdrawal
         III. Apnea
            a. Brief Resolved Unexplained Event (BRUE)
            b. GERD
            c. Respiratory infection
            d. Seizures/Status Epilepticus
            e. Sepsis
         IV. Gastrointestinal bleeding
            a. Inflammatory Bowel Disease
            b. Intussusception
            c. Meckel's Diverticulum
            d. Polyps
            e. Rectal Prolapse
         V. Injuries and accidents
            a. Animal bites
            b. Concussion
            c. Minor head injury
         VI. Shock
            a. Cardiogenic
            b. Distributive
            c. Obstructive
            d. Dissociative
            e. Sepsis
            f. Hypovolemic
D. Recall the developmental vulnerability for poisoning, accidental and intentional ingestions in infants, toddlers, children and adolescents.

E. Recall the presentation and management of toxidromes syndromes, common poisoning and intoxications in children and adolescents nice

Osteopathic Manipulative Medicine and the Osteopathic approach to clinical cases are covered in the monthly workshops and tested on the OMM end-of-rotation exams. Students are responsible for reviewing the OMM Syllabus and meeting the learning objectives covered in each month’s workshop.