

Pediatric Medicine Educational Goals & Objectives

The Pediatric Medicine rotation will provide the resident with an opportunity to become skilled in the prevention, evaluation and management of acute and chronic medical conditions commonly seen in pediatric medicine. Residents will rotate through the clinic, inpatient service, and neonatal intensive care unit, caring for patients from infancy through adolescence. The focus will be on the relationship with patients and their families, continuity of care, and the effective delivery of primary care. Residents will gain exposure to a broad spectrum of medical conditions, ranging from core pediatric medicine issues to conditions requiring knowledge of allergy and immunology, child development, dermatology, genetic and metabolic disorders, nutrition, ophthalmology, orthopedics, otolaryngology, preventative medicine, and psychiatry as they pertain to the general care of children in the community.

Faculty will facilitate learning in the 6 core competencies as follows:

Patient Care and Procedural Skills

- I. All residents must be able to provide compassionate, culturally-sensitive care for children and their families.
 - PGY2s should seek directed and appropriate specialty consultation when necessary to further patient care.
 - PGY3s should be able to coordinate input from multiple consultants and manage conflicting recommendations.
- II. All residents will demonstrate the ability to take an age-appropriate medical history and incorporate information from the electronic medical record.
 - PGY1s should be able to
 - differentiate between stable and unstable symptoms
 - elicit risk factors in the child's environment that contribute to the development of chronic disease
 - take a complete developmental history for infants and young children, including information on pregnancy and labor and the achievement of developmental milestones
 - recognize the significance of input from teachers regarding performance at school and learning issues
 - PGY2s will independently obtain the above information and identify barriers to family compliance and care.
 - PGY3s should be able to independently obtain the above details for patients with complex medical histories and multiple comorbid conditions.
- III. Residents should be able to perform a physical exam appropriately focused on the patient's presenting complaint.
 - PGY1s should become competent in routine newborn and well child checks, sports physicals, and assessing sexual development and Tanner staging.
 - PGY2s should be able to focus on and characterize abnormal exam findings pertinent to the presenting complaint and understand the necessary elements in an exam for physical or sexual abuse.
 - PGY3s should be able to independently perform a complete exam and understand the sensitivity and specificity of physical findings.

- IV. Residents will understand the indications, contraindications, complications, limitations, and interpretation of the following procedures, and become competent in their safe and effective use:
- PGY1s: bladder catheter placement, cerumen removal, fluorescein and Wood's light exam of eye, incision and drainage of skin abscesses, interosseous line placement, lumbar puncture, nail removal, pelvic examination and PAP smear, PALS, punch biopsy, splinting and casting, suturing and suture removal, vascular access
 - PGY2s: circumcision, frenotomy
 - PGY3s: procedural sedation

Medical Knowledge

- I. PGY1s will become skilled in the approach to acute medical issues in the newborn, including:
- Anemia
 - Apnea
 - Cyanosis
 - Hip dysplasia
 - Hypoglycemia
 - Jaundice
 - Maternal infections (HIV, Hepatitis)
 - Meconium-stained amniotic fluid
 - Neonatal abstinence syndrome
 - Perinatal asphyxia
 - Polycythemia
 - Premature and post-date gestations
 - Respiratory distress
 - Rh factor and blood type incompatibility
 - Seizures
 - Sepsis
 - Shoulder dystocia
- II. PGY2s will also become competent in addressing common problems affecting infants and children, including behavioral issues, colic, constipation, failure to thrive, feeding issues, school readiness, sleep issues, Sudden Infant Death Syndrome, and toilet training.
- III. PGY2s will become skilled in addressing developmental and psychological diagnoses seen in childhood, including ADHD and autism spectrum disorders, common genetic disorders, conduct disorders, developmental delays, eating disorders, learning disorders, obsessive-compulsive disorders, mood disorders, and psychotic disorders.

- IV. PGY3s will gain a better understanding of the above conditions within the setting of complex pediatric comorbidities as well as addressing these conditions with increasing independence, particularly within the setting of their continuity clinic.
- V. Residents will become comfortable with social and ethical issues affecting families, including adoption; divorce, separation and death; guidelines for effective parenting; nontraditional families, and withdrawal of life support.
- VI. PGY1s will develop an approach to the following presenting conditions, including an understanding of the pathophysiology, differential diagnosis, focused diagnostic evaluation, and therapy:
- Abdominal pain
 - Cough
 - Depression
 - Diarrhea
 - Fever
 - Headache
 - Heart murmur
 - Hematuria
 - Limp or extremity pain
 - Lymphadenopathy
 - Obesity
 - Otagia
 - Petechiae/purpura
 - Proteinuria
 - Rash
 - Red eye or wandering eye
 - Rhinorrhea
 - School failure
 - Seizures
 - Sore throat
 - Undescended testes
 - Vomiting
 - Wheezing

PGY2s should be able to incorporate presenting information into the context of past medical history to generate a differential diagnosis and a more thorough plan of care.

PGY3s should be able to understand statistical concepts such as pretest probability, number needed to treat, etc. and their effect on diagnostic workup and treatment.

- VII. All residents will also develop an understanding of the pathophysiology, clinical presentation, natural history, and therapy for a broad spectrum of systemic disorders, including the following conditions:
- ADHD
 - Allergic rhinitis
 - Anorexia and bulimia
 - Appendicitis

- Asthma
- Bronchiolitis and/or pneumonia
- Celiac disease
- Cellulitis
- Conjunctivitis
- Croup
- Dermatitis: atopic, contact, seborrheic
- Diabetes mellitus
- Fracture
- Gastroenteritis
- Glomerulonephritis
- Group A streptococcal pharyngitis
- Henoch Schonlein purpura
- Hip dysplasia
- HIV
- Impetigo
- Intussusception
- Juvenile Rheumatoid Arthritis and reactive arthritis
- Kawasaki disease
- Legg-Calve-Perthes disease
- Lice and scabies
- Meningitis
- Mononucleosis
- Nursemaid elbow
- Osgood Schlatter disease
- Osteomyelitis
- Otitis media and otitis externa
- Pelvic inflammatory disease
- Postnasal drip
- Rheumatic fever
- Sexually transmitted infections
- Sickle cell crisis
- Sinusitis
- Slipped capital femoral epiphysis
- Transient synovitis
- Tuberculosis: active and latent
- Unintended pregnancy
- Urinary tract infection and pyelonephritis
- Urticaria
- Vasculitis syndromes
- Viral exanthem
- Viral upper respiratory infection

VIII. Residents will understand the effective use and interpretation of the following tools:

- AMA Guidelines for Adolescent Preventative Services (GAPS)

- APGAR score
 - Ballard score
 - Bioelectrical Impedance Assay of body fat (BIA)
 - Connors and Vanderbilt questionnaires
 - CRAFFT behavioral health screening tool
 - Developmental screening tests
 - HEADSSS questionnaire (Home, Education, Activities, Drugs, Sex, Suicide/Depression, Safety)
- IX. Residents will become familiar with frequently used complementary and alternative medicine treatments for common pediatric problems.
- X. Residents will be aware of American Academy of Pediatrics guidelines for health maintenance and be able to counsel patients and their families on the following matters pertaining to growth, development, and health care maintenance:
- Alcohol and drug screening and counseling for adolescents and children in upper elementary grades
 - Caloric requirements and nutrition
 - Contraception, safe sex, healthy relationships, and consent
 - Exercise and promotion of healthy lifestyles for both children and their families
 - Gender identification and sexual orientation
 - Injury prevention (burns, child abuse, car seats and seat belts, choking, drowning, falls, firearms, fire safety, helmets, poisoning, sunscreen)
 - Screening for anemia, lead exposure, fluoride, hearing and vision, hypertension, hyperlipidemia, obesity, and TB
 - Vaccination
- XI. Residents will understand indications for ordering and interpretation of results from diagnostic, laboratory and imaging studies relevant to the diagnosis and treatment of the above conditions.

Practice-Based Learning and Improvement

- I. All residents should be able to access current clinical practice guidelines to apply evidence-based strategies to patient care.
- II. PGY2s should develop skills in evaluating studies in published literature, through Journal Club and independent study.
- III. All residents should learn to function as part of a team, including the pediatrician, nurse, pharmacist, dietician and social worker to optimize patient care, with PGY3s taking a leadership role.
- IV. All residents should respond with positive changes to feedback from members of the health care team.

Interpersonal and Communication Skills

- I. PGY1s must demonstrate organized and articulate written (electronic) and verbal communication skills that build rapport with patients and their families, convey

- information to other health care professionals, and provide timely documentation in the chart.
- II. PGY2s must also develop interpersonal skills that facilitate collaboration with patients, educate families, and where appropriate, promote behavioral change.
 - III. PGY3s should demonstrate leadership skills to build consensus and coordinate a multidisciplinary approach to patient care.
 - IV. PGY3s must be able to elicit information in situations with complex social dynamics, for example, identifying the legal decision-maker in divorced families or when Child Protective Services or other governmental agencies are involved in a child's care.

Professionalism

- I. All residents must demonstrate strong commitment to carrying out professional responsibilities as reflected in their conduct, ethical behavior, attire, interactions with colleagues and community, and devotion to patient care.
- II. All residents should be able to educate patients and their families in a manner respectful of gender, age, culture, race, religion, disabilities, national origin, socioeconomic status, and sexual orientation on choices regarding their care.
- III. PGY2s should be able to use time efficiently in the clinic to see patients and chart information.
- IV. PGY3s should be able to provide constructive criticism and feedback to more junior members of the team.

Systems-Based Practice

- I. PGY1s must have a basic understanding that their diagnostic and treatment decisions involve cost and risk and affect quality of care.
- II. PGY2s must be able to discuss alternative care strategies, taking into account the social, economic, and psychological factors that affect patient health and use of resources.
- III. PGY2s should understand the impact of insurance status on patient access to care and be aware of the availability of case workers, counseling services, and other community resources to maximize care and promote the health of children and their families.
- IV. PGY3s must demonstrate an awareness of and responsiveness to established quality measures, risk management strategies, and cost of care within our system.

Teaching Methods

- I. Supervised patient care in the clinic and hospital
 - Residents will initially be directly observed with patients, to facilitate the acquisition of excellent history taking, physical exam, and procedural skills.
 - As residents become more proficient, they will interact independently with patients and present cases to faculty.

- For PGY1s, initial emphasis will be on diagnosis and basic management.
- For more senior residents, focus will be on medical decision-making, and residents will work with supervising physicians to finalize a care plan.

II. Conferences

- Specialty-specific didactics

III. Independent study

- Journal and textbook reading TBD by Attending physician
- Online educational resources
 - American Academy of Pediatrics www.aap.org
Professional resources -> Clinical Support
Pedialink.org
 - American Academy of Pediatrics Statement: Ensuring Comprehensive Care and Support for Transgender and Gender-Diverse Children and Adolescents:
<https://pediatrics.aappublications.org/content/142/4/e20182162>
 - Eliminating Race-Based Medicine:
<https://publications.aap.org/pediatrics/article/doi/10.1542/peds.2022-057998/186963/Eliminating-Race-Based-Medicine>
 - The American College of Obstetricians and Gynecologists Committee Opinion: Adolescents and Long-Acting Reversible Contraception:
<https://www.acog.org/clinical/clinical-guidance/committee-opinion/articles/2018/05/adolescents-and-long-acting-reversible-contraception-implants-and-intrauterine-devices>
 - Managing procedural anxiety in children:
<https://www.nejm.org/doi/full/10.1056/NEJMvcm1411127>
 - Trans and gender diverse resources:
 - <https://www.acog.org/clinical/clinical-guidance/committee-opinion/articles/2021/03/health-care-for-transgender-and-gender-diverse-individuals>
 - <https://transcare.ucsf.edu/guidelines>
 - <http://transhealth.ucsf.edu/trans?page=guidelines-terminology>
 - <https://stanford.cloud-cme.com/default.aspx?EID=20959&P=3000&CaseID=26>
- Up To Date
- Clinical Key

Evaluation

- I. Case and procedure logs
- II. Mini-CEX bedside evaluation tool
- III. 360 Evaluation
- IV. Mid-rotation verbal feedback
- V. Attending written evaluation of resident at the end of the year, based on observations and chart review.

Rotation Structure

- I. Residents should contact Dr. Shuman the day prior to confirm start time and location.
- II. Residents should spend their time in the clinic or hospital, dividing their time as appropriate to achieve the above educational goals.
 - Residents are the primary care providers for these patients. Residents will be involved in discussion of patient presentation, generation of a differential diagnosis, development of a treatment plan, and patient follow up. In addition, residents will be involved in surgical procedures as is appropriate.
 - Case-based learning is most effective. Nightly reading/study should be based on patients seen during the day.
 - When doing pediatric consults, the resident should understand the question asked and provide a concise answer.
- III. Residents may be asked to do focused literature searches or presentations during the course of the rotation.
- IV. Call and weekend responsibilities TBD by Dr. Shuman.
 - Hours worked must be consistent with ACGME requirements and are subject to approval by the Program Director.
- V. Residents have specialty-specific didactics and should be excused in a timely fashion to attend.