

Pediatric Endocrine Elective (PL2, PL3, PL4)

The Endocrine Rotation is for PL2 and PL3 categorical residents. Most categorical residents will take the rotation in either the PL2 or PL3 year. In the case of the Med Peds Residents it may be taken in either PL2, PL3 or PL4 year. In the endocrine rotation the resident is primarily expected to master communication and patient-care objectives and to read about all conditions he/she sees during the rotation. Any differences in goals, by level, will be noted under individual goals. However, it is important for residents to have mastered all of the material by the end of their rotation in Pediatric Endocrine.

The rotation is primarily an outpatient experience, though the resident may be asked to do inpatient consultations with the attending physician on service. In addition to learning and practicing the care of endocrine patients, the elective will present an in-depth experience of endocrinology as a subspecialty, including, but not limited to, conditions such as diabetes, growth, thyroid, adrenal, puberty (premature, normal and delayed), obesity, genetic aspects of endocrine disorders, Turner's syndrome, calcium disorders, sexual differentiation and ambiguity, hypoglycemia, carbohydrate metabolism, water regulation disorders, autoimmune endocrinopathies, and multiple endocrine neoplasias.

Goals and Objectives

Patient Care:

GOALS: Residents are expected to care for patients seen by Pediatric Endocrinologists. This involves the resident to be able to assess the problem for what the patient was referred, obtain appropriate history, perform appropriate physical and especially focus on those areas pertinent to the medical condition, and finally to provide a care plan and evaluation appropriate for the presumed diagnosis.

OBJECTIVES:

- Obtain accurate and appropriate medical and psychosocial information for each patient.
- Perform a gender and age-appropriate physical examination on patient.
- Performs appropriate history and physical examination.
- Reviews immunization status on Chronic Patients in regards to Flu and Pneumovax vaccination
- Recognize normal and abnormal growth and development in prepubertal/adolescent patients and be able to initiate an appropriate workup for the latter.
- Perform an appropriate external examination on adolescents both male and female.

- Assess and interpret patients' educational/school performance and how chronic disease (i.e. diabetes may affect this performance)

Medical Knowledge:

GOALS: Residents must consistently demonstrate proficiency in obtaining knowledge through reading the reference literature, performing evidence-based reviews, clinical discussion, and weekly didactic discussions with the endocrine faculty members. They will apply an open-minded, analytical approach to acquiring new knowledge, using faculty experience whenever needed.

OBJECTIVES:

1. *Residents to understand the Approach, Diagnosis and Treatment of Following Endocrine Disorders.*
 - A. *Thyroid Disorders-Hypothyroidism/Hyperthyroidism*
 - B. *Disorders of Growth*
 - C. *Disorders of Calcium, Phosphate, PTH and Vitamin D*
 - D. *Disorders of Pubertal Development*
 - E. *Delayed Puberty*
 - F. *Turner's Syndrome*
 - G. *Obesity*
 - H. *Autoimmune Endocrinopathies and Multiple Endocrine Neoplasias*
 - I. *Adrenal Disorders*
 - J. *Carbohydrate Metabolism and Hypoglycemia*
 - K. *Genetic Aspects of Endocrine Diseases*
 - L. *Sexual Differentiation and Ambiguity*
 - M. *Water Regulation and It's Disorders*
2. *Residents Must Understand Interpreting Endocrine History and Physical*
 - A. *Interpreting Growth Curves*
 - B. *Interpreting Bone ages and Endocrine Imaging*
 - C. *Examining Patient and Interpreting Physical Exam Signs*
 - D. *Learning Pubertal Tanner Staging*
 - E. *Reviewing History Pertinent to Endocrine Disorders*
3. *Understand Type 1 and Type 2 Diabetes as well As MODY and Cystic Fibrosis Diabetes*
 - A. *Learn How to Manage Diabetic Ketoacidosis*
 - B. *Learn Various Types of Insulin Regimens*
 - C. *Learn About Insulin Pumps*

- D. Learn About Managing Chronic Disease with a Team of Nurse Practitioners, Social Service and Nutritionists*
- E. Learn how to Diagnose Type 1 vs Type 2*
- F. Learn about MODY and Cystic Fibrosis Diabetes*

Practice-Based Learning and Improvement:

GOALS: Residents are expected to investigate and evaluate patient care practices and to appraise and assimilate clinical information to make appropriate patient management decisions. They should learn to improve their care of any given condition as they learn more about the condition they are treating.

OBJECTIVES:

- Consistently review the pediatric endocrine literature using paper, computer and web-based resources.
- Consistently evaluate individual performance, identify gaps in knowledge, and target learning to fill these gaps.
- Consistently demonstrate learning from error.
- Work well with other learners to enhance the common knowledge.
- Provide, request, and accept feedback about performance.
- Facilitate the learning of students, junior residents, and other health care professionals (PL-3 and PL-4).
- Perform an evidence-based review on an pediatric endocrine topic and present that review to faculty (PL-3).

Interpersonal and Communication Skills:

GOALS: Residents are expected to consistently demonstrate interpersonal and communication skills that result in effective information exchange and collaboration with colleagues, patients, and their parents. They must be able to approach the patients and families in a patient-centered manner.

OBJECTIVES:

- Create and sustain a therapeutic and ethically sound relationship with endocrine patients and their families.
- Use effective listening skills (nonverbal, explanatory, and questioning) to elicit and provide information during the endocrine interview.
- Maintain gender neutral tone when appropriate.
- Understand and explain issues of confidentiality, disclosure, and consent.

- Use consultants appropriately and communicate effectively with them in a timely fashion.
- Maintain accurate and timely medical records.
- Provide counseling during patient encounters.
- Provide follow up to patients about laboratory and radiologic studies.

Professionalism:

GOALS: Residents are expected to understand and demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population.

OBJECTIVES:

- Consistently act in the best interest of patients.
- Consistently demonstrate a caring and respectful demeanor when interacting with patients and families.
- Maintain patient/family confidentiality.
- Demonstrate sensitivity to and respect for differences in race, ethnicity, culture, socioeconomic status, educational attainment, age, gender, sexual preference, and disability.
- Apply fundamental bioethical principles to the provision of care.
- Conscientiously punctual, reliable, and dressed in an appropriate and professional manner.
- Follow hospital procedures for acknowledging, reporting, and correcting errors.
- Discuss errors honestly with families, when appropriate.

Systems-Based Practice:

GOALS: Residents are expected to practice quality health care and to advocate for patients within the health care system by helping patients successfully navigate through it for the best outcomes possible. They should be able to work effectively with a multi-disciplinary team of providers to aid in the best outcomes possible.

OBJECTIVES:

- Consistently advocate for patients and families and help them navigate the healthcare system by assisting them in making appointments, scheduling studies in a timely manner, and calling other providers to communicate about the patient, when necessary.
- Describe billing and coding procedures and their supporting documentation.

- Appropriately refer and follow-up patients when necessary.
- Demonstrate appropriate communication and collaboration with subspecialty consultants and ancillary staff.
- Demonstrate knowledge of a variety of community resources available to patients and their families.

Pediatric Endocrine Resources

1. *Pediatric Endocrinology- Radovik/MacGillivray*
2. *Pediatric Endocrinology and Growth- Wales/Witt/Rogol*
3. *Williams Textbook of Endocrinology*
4. *Inborn Metabolic Diseases-Fernandes/Saudubray/ Van den Berghe*
5. *Wilkins The Diagnosis and Treatment Endocrine Disorders in Childhood and Adolescence- Kappy, Blizzard, and Migeon*
6. *Gruelich and Pyle Bone age Standards*