Endocrinology Goals & Objectives	Objectives by Competency and Level of Training			Assessment Methods
	PL-1	PL-2	PL-3	
GOAL 1: Prevention, Counseling and Screening Understand the role of the pediatrician in preventing endocrine dysfunction, and in counseling and screening individuals at risk for these diseases: 1. Normal variations in growth (including genetic short stature and constitutional growth delay) 2. Expected and normal variations in body changes during puberty (information should be ethnic group specific) 3.The importance of vitamin D supplements in breast-fed infants and select populations with low intake of vitamin D, calcium or phosphorus 4.Diabetic screening for patients with symptoms of polyuria, polydipsia and polyphagia 5.Diabetic, hypercholesterolemia and hypertriglyceridemia screening for any child who is obese 6.Newborn metabolic screening, when appropriate 7.Normal variations in growth (including genetic short stature and constitutional growth delay) 8.Expected and normal variations in body changes during puberty (information should be ethnic group specific) 9.The importance of vitamin D supplements in breast-fed infants and select populations with low intake of vitamin D, calcium or phosphorus 10.Diabetic screening for patients with symptoms of polyuria, polydipsia and polyphagia 11.Diabetic, hypercholesterolemia and hypertriglyceridemia screening for any child who is obese 12.Newborn metabolic screening, when appropriate	**Patient Care**: Identify the individual at risk for developing endocrine dysfunction through routine endocrine counseling and screening of all patients and parents	**Patient Care**: Provide preventive counseling to parents and patients with specific endocrine conditions	**Patient Care**: Role model gathering subtle and reliable information from patient and family and providing effective preventive counseling	Direct Observation Global Evaluation
GOAL 2: Differentiate between normal, physiologic deviations from normal, and pathological states related to endocrinology.	**Medical Knowledge**: 1. Describe the normal developmental patterns of statural growth and weight gain, along with normal variations. Describe body proportions that can help to differentiate proportionate from disproportionate short stature 2. Perform Tanner staging (SMR) and explain the sequential physiologic events associated with puberty	**Medical Knowledge**: 1. Identify early puberty and differentiate it from premature thelarche and premature adrenarche 2. Describe the hypothalamus-pituitary-peripheral gland axis along with their stimulatory and inhibitory feedback mechanisms 3. Describe calcium and phosphorus homeostasis, vitamin D metabolism, parathyroid hormone functions, and their interrelationships	**Medical Knowledge**: 1. Explain the findings on clinical history and examination that suggest a disease of endocrine origin and require further evaluation and treatment 2. Interpret clinical and laboratory endocrine tests to identify endocrine disease	Global Evaluation In-Training Exam
GOAL 3: Recognize, initiate management of, and refer patients with endocrine conditions that require referral. 1.Adrenal insufficiency 2.Ambiguous genitalia, hypogonadism, and micropenis 3.Central and nephrogenic diabetes insipidus and psychogenic polydipsia 4.Congenital adrenal hyperplasia 5.Delayed or precocious puberty 6.Diabetes mellitus type I (diabetic ketoacidosis (DKA), long-term management) 7.Endocrine and genetic causes of obesity 8.Genetic syndromes and familial inheritance patterns with endocrine abnormalities 9.Hirsutism, hyperandrogenism, and polycystic ovaries 10.Hypoglycemia in childhood and adolescence 11.Metabolic bone disease including rickets and skeletal dysplasias 12.Abnormalities of calcium, phosphorus, or magnesium homeostasis 13.Short stature variants meeting criteria for hormonal treatment 14.Tall stature and excessive growth syndromes 15.Thyroid dysfunction and goiters 16.Diabetes mellitus type II	**Patient Care**: Identify, explain the pathophysiology of, provide initial management for, and understand the indications for subspecialty referral	**Patient Care**: Obtain relevant historical subtleties that inform and prioritize differential diagnoses and diagnostic information with respect to endocrine disorders	**Patient Care**: 1. Role model gathering subtle and reliable information from patient and family 2. Routinely identify subtle or unusual PE findings, demonstrating an understanding of how they influence clinical decision making 3. Modify differential diagnosis and therapy based upon clinical course 4. Recognize disease patterns which deviate from common patterns and require complex decision making	Direct Observation Global Evaluation
GOAL 4: Diabetes Mellitus (Types I and II). Diagnose and manage uncomplicated diabetes mellitus with or without the assistance of an endocrinologist.	**Patient Care**: Diagnose diabetes mellitus and diabetic ketoacidosis from presenting symptoms and confirmatory lab tests	**Patient Care**: 1. Order appropriate confirmatory diagnostic serum and urine tests for diabetes mellitus and accurately interpret the results 2. Order appropriate initial dosages of insulin, based on both clinical and laboratory findings, and adjust subsequent dosages based on serum glucose levels 3. Order appropriate IV and PO fluids to manage ketoacidosis and initial hyperglycemia with or without ketosis, realizing that insulin therapy may be required in the initial treatment of Type II diabetes	**Patient Care**: Recognize immediate life-threatening complications associated with the diagnosis and treatment of diabetic ketoacidosis and steps for initial treatment and stabilization. Refer for intensive care as indicated	Direct Observation Global Evaluation
	Medical Knowledge: 1. List the findings on clinical history and examination that suggest a diagnosis of diabetes mellitus and/or diabetic ketoacidosis 2. Identify the risk factors for developing type 2 diabetes and provide routine screening for those at elevated risk 3. Differentiate Type I and Type II diabetes on the basis of findings from the clinical history, physical examination, and laboratory tests	**Medical Knowledge**: Compare and contrast the different preparations of insulin and describe the pharmacokinetics of each	**Medical Knowledge**: Discuss treatment regimens available for patients with Type II diabetes, including the use of oral medications, determination of initial dosages, drug pharmacokinetics, dose adjustments based on serum glucose levels, possible side effects and monitoring for safety	Global Evaluation In-Training Exam
	Interpersonal Skills and Communication Provide effective patient education, including reassurance, for condition(s) commonly seen on the inpatient service	**Interpersonal Skills and Communication** Engage patients and families in shared decision making	**Interpersonal Skills and Communication** 1. Develop effective strategies for teaching students, colleagues, other professionals and laypersons 2. Role model effective communication skills in challenging situations 3. Develop an educational plan for parents and patients that provides effective education regarding diabetes, availability of support groups and diabetic camps, diet and exercise, home glucose monitoring, adjustment of insulin or oral medications dosages, use of insulin pumps, response to illness, and preventive care	360º Feedback Direct Observation Global Evaluation
		Systems-Based Practice Identify the clinical and biochemical indicators that necessitate consultation or referral of a child with diabetes.	**Systems-Based Practice** Develop a cost-effective plan for monitoring patients with diabetes, including use of hemoglobin A1-C levels and daily glucose profiles to assess control, frequency and severity of hypoglycemia and hyperglycemia, treatment compliance, and the development of long term complications such as retinopathy, nephropathy and neuropathy	360º Feedback Direct Observation Global Evaluation
GOAL 5: Thyroid Disorders. Understand the general pediatrician's role in the diagnosis and management of patients with congenital and acquired hypothyroidism and hyperthyroidism.	**Medical Knowledge**: 1. Explain the findings on clinical history, examination, and laboratory tests that suggest the presence of a thyroid disorder (hypo- or hyper-thyroidism), including abnormal growth patterns, goiter, etc 2. Identify the thyroid function tests, including newborn screening, available for detecting and diagnosing a thyroid disorder, and describe the indications for ordering, limitations and interpretations	**Medical Knowledge**: 1. Discuss the identification, treatment, and follow-up in a patient with congenital hypothyroidism. Discussion should include the importance of early detection and limitations of newborn screenings, as well as treatment, monitoring and parental education 2. Discuss the causes of hyperthyroidism 3. Identify indicators for an endocrine referral of a child with a thyroid disorder	**Medical Knowledge**: 1. Identify imaging studies available for patients with a thyroid disorder and the indications for obtaining such studies 2. Compare and contrast the different treatment options for hyperthyroidism, including oral medications, irradiation and surgery, and discuss the selection criteria for each treatment modality	Global Evaluation In-Training Exam