

Endocrinology Subspecialty Training Program

Continuity Clinic Rotation: Goals and Objectives

Description

The University of Florida-Jacksonville Endocrinology Training Program is a two-year program encompassing both clinical and research experiences. Fellows have ambulatory care responsibilities including two half-day/week continuity clinics during the first year and the second years. This experience provides unique opportunities to evaluate unusual presentations of common endocrine and metabolic diseases and requires additional instruction in the unique systems-based practice involved with caring for individuals with limited resources and health disparities. Teaching methods include instruction at the time of the patient visit and follow-up group discussions at the end of clinic. Fellows are evaluated at the time of the patient encounter receiving immediate feedback, each of the clinic progress notes is reviewed for accuracy and completeness after clinic, at the rotational evaluation by the preceptor and through multisource assessments.

Overall Program Goals

The goals of the University of Florida Jacksonville Endocrinology Continuity Clinic Rotation are:

1. Provide comprehensive instruction and experience in clinical endocrinology, including evaluation and treatment of disorders of the hypothalamus, pituitary, parathyroid, thyroid, endocrine pancreas, gonadal and adrenal glands, as well as diabetes mellitus, obesity, dyslipidemias, hypertension, bone diseases, neuroendocrine diseases, and metabolic disorders sufficient for the fellow to acquire the competency of a specialist in the field.
2. Develop a continuous healing relationship with patients for whom they provide subspecialty care during the length of the fellowship
3. Provide fellows the opportunity to observe and analyze the course of a variety of endocrine disorders.

Medical Knowledge

Goal

Fellow organize knowledge of established and evolving biomedical, clinical, epidemiological, and social-behavioral sciences and apply this knowledge to patient care.

Specific objectives:

1. First year fellows

- a. List and review biochemistry and physiology, including cell and molecular biology, as related to endocrinology, diabetes, and metabolism:
- b. Acquire an understanding of genetics as it relates to endocrine diseases.
- c. Describe developmental endocrinology, including growth and development, sexual differentiation, and pubertal maturation.
- d. Describe endocrine physiology and pathophysiology in systemic diseases and principles of hormone action.
- e. Recognize the various signal transduction pathways and biology of hormone receptors.
- f. Describe immunologic aspects of diabetes and other endocrinologic diseases.
- g. Discuss the pathogenesis and epidemiology of diabetes mellitus.
- h. Illustrate the appropriate evaluation and management of type-1 and type-2 diabetes, including:
 - i. acute, life-threatening complications of hyper- and hypo-glycemia;
 - ii. intensive insulin management in critical care and surgical patients;
 - iii. long term goals, counseling, education and monitoring;
 - iv. intensive management of glycemic control in the ambulatory setting;
 - v. prevention and surveillance of microvascular and macrovascular complications;
 - vi. diabetes detection and management during pregnancy; and
 - vii. multidisciplinary diabetes education and treatment program
- i. Determine the role and principles of intensive diabetes management, as well as the role of whole organ and islet cell pancreatic transplantation.
- j. Practice safe and effective diagnosis and management of disorders of fluid, electrolyte, and acid-base metabolism; disorders of bone and mineral metabolism, with particular emphasis on the diagnosis and management of osteoporosis; calcium, phosphorus, and magnesium imbalance; diagnosis and management of ectopic hormone production; endocrine adaptations and maladaptations to systemic diseases; endocrine aspects of psychiatric diseases; parenteral nutrition support; nutritional disorders of obesity, anorexia nervosa, and bulimia; diagnosis and management of lipid and lipoprotein disorders.

- k. Practice safe and effective diagnosis and management of hormonal problems including diseases, infections, neoplasms and other causes of dysfunction of the following endocrine organs:
 - i. hypothalamus and pituitary;
 - ii. thyroid;
 - iii. adrenal cortex and medulla;
 - iv. pancreatic islets;
 - v. ovaries and testes; and
 - vi. parathyroid.
- l. Apply appropriate utilization and interpretation of clinical laboratory, radionuclide, and radiologic studies for the diagnosis and treatment of endocrine and metabolic diseases, as well as knowledge of basic laboratory techniques, including quality control, quality assurance, and proficiency standards.
- m. Describe the elements of experimental design and clinical implications, and acquire hands on experience with investigational procedures relevant to endocrinology.
- n. Discuss the evolution of endocrinologic disease in continuity clinic patients.

2. Second Year Fellows:

- a. Under faculty observation and guidance, the fellow will present biochemistry and physiology principles, including cell and molecular biology, as related to endocrinology, diabetes, and metabolism, to colleagues and trainees including:
- b. Organize an understanding of genetics as it relates to endocrine diseases.
- c. Contrast normal and abnormal developmental endocrinology, including growth and development, sexual differentiation, and pubertal maturation.
- d. Construct an understanding of endocrine physiology and pathophysiology in systemic diseases and principles of hormone action.
- e. Relate the signal transduction pathways and biology of hormone receptors to human disease.
- f. Analyze the immunologic aspects of diabetes and other endocrinologic diseases and relate to patient care.
- g. Apply knowledge of pathogenesis and epidemiology of diabetes mellitus in developing treatment plans.

- h. Organize the evaluation and management of diabetes mellitus, including:
 - 1. acute, life-threatening complications of hyper- and hypo-glycemia;
 - 2. intensive insulin management in critical care and surgical patients;
 - 3. long term goals, counseling, education and monitoring;
 - 4. intensive management of glycemic control in the ambulatory setting;
 - 5. prevention and surveillance of microvascular and macrovascular complications;
 - 6. diabetes detection and management during pregnancy; and
 - 7. multidisciplinary diabetes education and treatment program.
- i. Apply the appropriate utilization and principles of intensive diabetes management, as well as the role of whole organ and islet cell pancreatic transplantation.
- j. Appropriately manage disorders of fluid, electrolyte, and acid-base metabolism; disorders of bone and mineral metabolism, with particular emphasis on the diagnosis and management of osteoporosis; calcium, phosphorus, and magnesium imbalance; diagnosis and management of ectopic hormone production; endocrine adaptations and maladaptations to systemic diseases; endocrine aspects of psychiatric diseases; parenteral nutrition support; nutritional disorders of obesity, anorexia nervosa, and bulimia; diagnosis and management of lipid and lipoprotein disorders.
- k. Practice safe and effective diagnosis and management of hormonal problems including diseases, infections, neoplasms and other causes of dysfunction of the following endocrine organs:
 - 1. hypothalamus and pituitary;
 - 2. thyroid;
 - 3. adrenal cortex and medulla;
 - 4. pancreatic islets;
 - 5. ovaries and testes; and
 - 6. parathyroid.
- l. Select appropriate utilization and interpretation of clinical laboratory, radionuclide, and imaging studies for the diagnosis and treatment of endocrine and metabolic

diseases. Presentations of clinical cases will describe basic laboratory techniques, including quality control, quality assurance, and proficiency standards.

Patient Care

Goal

Fellows must develop a continuous healing relationship with patients for whom they provide subspecialty care and establish patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health in an underserved population.

Specific objectives:

Fellows must construct an evaluation and management plan for endocrinologic diagnosis and treatment and must be able to organize and interpret appropriate laboratory tests and imaging procedures with the following specific objectives:

1. First year fellows will list and describe skills and second year fellows will exhibit skills in the evaluation and management of hormonal problems including diseases, infections, neoplasms and other causes of dysfunction of the following endocrine organs:
 - a. Hypothalamus and pituitary
 - b. Thyroid gland
 - c. Adrenal cortex and medulla
 - d. Pancreatic islets
 - e. Ovaries and testes
 - f. Parathyroid glands
2. First year fellows will list and describe skills and second year fellows must employ safe and effective evaluation and management of type 1 and type 2 diabetes including:
 - a. Acute, life-threatening complications of hyper- and hypo-glycemia
 - b. Intensive insulin management in critical care and surgical patients
 - c. Long term goals, counseling, education and monitoring
 - d. Intensive management of glycemic control in the ambulatory setting
 - e. Prevention and surveillance of microvascular, macrovascular and neuropathic complications
 - f. Diabetes detection and management during pregnancy
 - g. Principles of patient diabetes education and management programs

3. First year fellows will list and describe skills and second year fellows must employ safe and effective evaluation and management of multifactorial disorders associated with hormonal regulation including:
 - a. Disorders of fluid, electrolyte, and acid-base metabolism
 - b. Disorders of bone and mineral metabolism with particular emphasis on the diagnosis and management of osteoporosis
 - c. Calcium, phosphorus, and magnesium imbalance.
 - d. Diagnosis and management of ectopic hormone production
 - e. Endocrine adaptations and maladaptations to systemic diseases
 - f. Endocrine aspects of psychiatric diseases
 - g. Parenteral nutrition support
 - h. Nutritional disorders of obesity, anorexia nervosa, and bulimia
 - i. Diagnosis and management of lipid and lipoprotein disorders
 - j. Genetic screening and counseling for endocrine and metabolic disorders

Technical and Other Skills:

1. First year fellows will list and describe skills and second year fellows must employ safe and effective performance of the following:
 - a. Interpretation of laboratory studies, including the effects of nonendocrine disorders on these studies.
 1. Interpretation of hormone assays
 2. Interpretation of stimulation and suppression tests (including tests of the adrenal-pituitary-hypothalamic axis, water deprivation tests, growth hormone stimulation and suppression tests, renin-aldosterone suppression and stimulation tests 72 hour fast for hypoglycemia, and glucose tolerance tests for diabetes and metabolic syndromes)
 - b. Interpretation of radiologic and imaging studies for diagnosis and treatment of endocrine and metabolic diseases including:
 1. radionuclide uptake and localization studies of endocrine tissue
 2. ultrasonography of the soft tissues of the neck

4. First year fellows will list and describe skills and second year fellows must employ safe and effective interpretation of the following:
 - a. Radiologic measurement of bone density and other tests used in the management of osteoporosis and other metabolic bone diseases.
 - b. Radiologic studies used in the evaluation of patients with endocrine disorders, such as CT, and MRI.

Practice- Based Learning and Improvement

Goal

Fellows must investigate and evaluate their care of patients, to appraise and assimilate scientific evidence, and to improve continuously patient care based on constant self-evaluation and lifelong learning. Fellows are expected to develop skills and habits to be able to:

Specific objectives:

1. First year fellows
 - a. Locate, appraise, and assimilate evidence from scientific studies related to their patients' health problems and use information technology to optimize learning (e.g., computer based information systems).
 - b. Describe ways to systematically analyze practice, using quality improvement methods, and implement changes with the goal of practice improvement.
2. Second year fellows
 - a. Design and implement a quality improvement project regarding their clinic population.
 - b. Incorporate formative evaluation feedback into daily practice competencies.
3. First and second year fellows are expected to review current literature and apply evidence-based medical practices in the care of patients.
4. Fellows will receive formative written evaluations by faculty at the end of rotations, following conference presentations, and quarterly summary 360-degree evaluations, and are expected to use feedback for self-improvement.
5. Identify strengths, deficiencies, and limits in one's knowledge and expertise;
6. Set learning and improvement goals; identify and perform appropriate learning activities;
7. Systematically analyze practice, using quality improvement methods, and implement changes with the goal of practice improvement;

8. Participate in the education of patients, families, fellows and other health professionals.

Systems Based Practice

Goal

Fellows must practice an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care.

Specific objectives:

1. First year fellows
 - a. Locate, appraise, and assimilate evidence from scientific studies related to a systems based issue that influences patient care.
 - b. Describe ways to analyze systematically the elements in the process, using quality improvement methods.
2. Second year fellows
 - a. Design and implement a systems based quality improvement project regarding hospital or clinic population.
 - b. Incorporate formative evaluation feedback into systems based practice.
3. All fellows are expected to:
 - a. Recognize and utilize medical, surgical, and psychological consultation services available within UF and UF Health Jacksonville, as well as methods for patient referral to diabetes education, nutrition, rehabilitation, and social services.
 - b. Utilize patient resources within the community relevant to needs of patients with diabetes and disorders of the endocrine system (e.g., educational resources, consumer organizations, advocacy and support groups, and professional societies).
 - c. Retrieve patient records and laboratory data from within the local system, and from referring health care providers, or previous and concurrent sites of patient care.
 - d. Identify avenues for obtaining laboratory and imaging tests and recommended therapies for patients belonging to contracted health management organizations and insurance providers.

- e. Participate as a team member in situations requiring interdisciplinary patient care in outpatient settings.

Professionalism

Goal

Fellows must practice commitment to carrying out professional responsibilities and an adherence to ethical principles. Fellows are expected to render during the first year:

1. Compassion, integrity, and respect for others
2. Responsiveness to patient needs that supersedes self-interest
3. Respect for patient privacy and autonomy
4. Accountability to patients, society, and the profession
5. Sensitivity and responsiveness to a diverse patient population, including but not limited to diversity in gender, age, culture, race, religion, disabilities, and sexual orientation
6. Commitment to scholarship through presentations of conferences, literature reviews, or publications related to personal research and clinical cases.
7. Development of effective teaching skills for instruction of patients, peers, and other health care professionals through conference presentations and on an individual level.

Interpersonal and Communication Skills

Goal

Residents must adhere to interpersonal and communication skills that result in the effective exchange of information and teaming with patients, their families, and professional associates.

Specific objectives:

1. Fellows are expected to:
2. Communicate effectively with patients and families across a broad range of socioeconomic and cultural backgrounds
3. Use simple nontechnical language for oral and written communications and instructions
4. Use appropriate interpreters for language barriers and sensory impairments
5. Communicate effectively with physicians, other health professionals, and health related agencies

6. Write timely, appropriately comprehensive consultation notes and letters with clear assessments and management plans.
7. Write or relay unambiguous orders, instructions, and recommendations.
8. Maintain comprehensive, timely, and legible medical records
9. Present effective teaching conferences using logical organization and appropriate audio-visual media.
10. Effectively teach and share literature resources with students, other residents, and referring physicians on an individual basis.