

Endocrinology Subspecialty Educational Program Outpatient Endocrinology Rotation: Goals and Objectives

DESCRIPTION

The University of Florida-Jacksonville Endocrinology Educational Program is a two-year program encompassing both clinical and research experiences. Rotations for Year 1 include six one-month rotations on the adult endocrinology consultation service at UF Health-Jacksonville Medical Center, three month on ambulatory rotation and three months on the research rotation. In the second year, two months are spent on each of the adult endocrinology services at UF Health Jacksonville, Three months on outpatient endocrinology rotation, one month of pediatric endocrinology at Nemours Clinic Jacksonville/Wolfson Children's Hospital, one month of reproductive endocrinology at Jacksonville Center for Reproductive Medicine and four months on the research rotation. Fellows have ambulatory care responsibilities including two half-day/week continuity clinics during the first year and second years. They participate in faculty clinics, thyroid biopsy, and other outpatient procedures as first and second year fellows. Additional ambulatory care experiences are included during the pediatric and reproductive endocrinology rotations.

All fellows are expected to participate in weekly endocrinology conferences, journal club, weekly core program, Grand Rounds, and core curriculum and research lectures, as well as specifically scheduled City Wide Endocrinology Conference meetings and division-sponsored symposia. Each fellow is responsible for preparing three of the weekly endocrinology conferences, three Journal clubs. In addition, each fellow is expected to submit at least one manuscript or abstract for publication or presentation at a regional or national conference by the completion of the second year of training.

OVERALL PROGRAM GOALS

The goals of the University of Florida Jacksonville Endocrinology Subspecialty Educational Program are:

1. Provide comprehensive education 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. Introduce the principles of clinical and laboratory research and to provide experience in relevant endocrinologic investigations.

MEDICAL KNOWLEDGE

Goal

Residents must integrate established and evolving biomedical, clinical, epidemiological, and social-behavioral sciences, as well as apply this knowledge to patient care.

Specific objectives:

1. First year fellows are expected to:
 - a. Acquire and describe the biochemistry and physiology, including cell and molecular biology, as related to the practice of endocrinology, diabetes, and metabolism, and will be expected to:
 1. Apply knowledge of genetics as it relates to endocrine diseases.
 2. Describe developmental endocrinology, including growth and development, sexual differentiation, and pubertal maturation.
 3. Describe endocrine physiology and pathophysiology in systemic diseases and principles of hormone action.
 4. Acquire the concepts of signal transduction pathways and biology of hormone receptors.
 5. Discuss the immunologic aspects of diabetes and other endocrinologic diseases.
 6. Describe pathogenesis and epidemiology of diabetes mellitus.
 7. Safely and effectively evaluate and manage 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 and macrovascular complications;
 - f. diabetes detection and management during pregnancy; and
 - g. multidisciplinary diabetes education and treatment program
 8. Determine the role and principles of intensive diabetes management, as well as the role of whole organ and islet cell pancreatic transplantation.
 9. Safely and effectively evaluate and 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.
 10. Safely and effectively evaluate and manage hormonal problems including diseases, infections, neoplasms and other causes of dysfunction of the following endocrine organs:
 - a. hypothalamus and pituitary;
 - b. thyroid;
 - c. adrenal cortex and medulla;
 - d. pancreatic islets;
 - e. ovaries and testes; and
 - f. parathyroid.
 - b. 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.

- c. Describe the elements of experimental design and clinical implications, and acquire hands on experience with investigational procedures relevant to endocrinology.
2. Second Year Fellows
 - a. Under faculty observation and guidance, the fellow will prepare biochemistry and physiology concepts, including cell and molecular biology, as related to endocrinology, diabetes, and metabolism, to colleagues and trainees including:
 1. Apply genetic concepts as they relate to endocrine diseases.
 2. Illustrate concepts of developmental endocrinology, including growth and development, sexual differentiation, and pubertal maturation.
 3. Recognize normal endocrine physiology and pathophysiology in systemic diseases and principles of hormone action.
 4. Construct signal transduction pathways and biology of hormone receptors.
 5. Describe immunologic aspects of diabetes and other endocrinologic diseases.
 6. Apply knowledge of pathogenesis and epidemiology of diabetes mellitus in developing treatment plans.
 7. Organize competence in the evaluation and management of diabetes mellitus, 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 and macrovascular complications;
 - f. diabetes detection and management during pregnancy; and
 - g. multidisciplinary diabetes education and treatment program.
 8. Select the appropriate utilization and principles of intensive diabetes management, as well as the role of whole organ and islet cell pancreatic transplantation.
 9. Apply competence in 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.
 10. Criticize various strategies for the evaluation and management of hormonal problems including diseases, infections, neoplasms and other causes of dysfunction of the following endocrine organs to implement a safe and effective strategy:
 - a. hypothalamus and pituitary;
 - b. thyroid;
 - c. adrenal cortex and medulla;
 - d. pancreatic islets;
 - e. ovaries and testes; and
 - f. parathyroid.
 11. Evaluate 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.
 12. Explain elements of experimental design and clinical implications, and utilize appropriate techniques for a research question.

PATIENT CARE

Goal

Fellows must provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health.

Specific objectives:

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

1. First year fellows will develop skills and second year fellows will safely and effectively evaluate and manage hormonal disorders 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 develop skills and second year fellows will safely and effectively evaluate and manage 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 develop skills and second year fellows will safely and effectively evaluate and manage 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 develop skills and second year fellows will safely and effectively evaluate and manage:
 - a. Interpretation of laboratory studies, including the effects of nonendocrine disorders on these studies.
 1. Interpretation of hormone assays
 2. Performance and interpretation of stimulation and
 3. suppression tests (including tests of the adrenal-pituitary-
 4. hypothalamic axis, water deprivation tests, growth hormone
 5. 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
 - c. Performance of fine needle aspiration of the thyroid, and performance of thyroid ultrasound.
4. First year fellows must develop skills and second year fellows will safely and effectively evaluate and manage:
 - 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
5. First and second year fellows are expected to review current literature and apply evidence-based medical practices in the care of patients.
6. All fellows will attend the weekly Endocrine Conference, Journal Clubs and other specific conferences. Each fellow is expected to present three Endocrine conferences and three Journal Clubs per year with formative feedback from faculty and peers.
7. Fellows will participate in Quality Improvement conferences and will be expected to participate in oral and written critique of patient management and to identify areas for improved care.
8. 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.
9. Identify strengths, deficiencies, and limits in one's knowledge and expertise;
10. Set learning and improvement goals; identify and perform appropriate learning activities;
11. Systematically analyze practice, using quality improvement methods, and implement changes with the goal of practice improvement;
12. Participate in the education of patients, families, students, 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 Health Jacksonville, as well as methods for patient referral to diabetes education, nutrition, rehabilitation, and social services.
 - b. Identify 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. Recognize appropriate 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 professional responsibilities and adhere to ethical principles. Fellows are expected to conduct themselves during the first year and second year with:

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 practice 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:
 - a. Communicate effectively with patients and families across a broad range of socioeconomic and cultural backgrounds
 1. Use simple nontechnical language for oral and written communications and instructions
 2. Use appropriate interpreters for language barriers and sensory impairments
 - b. Communicate effectively with physicians, other health professionals, and health related agencies
 1. Write timely, appropriately comprehensive consultation notes and letters with clear assessments and management plans.
 2. Write or relay unambiguous orders, instructions, and recommendations.
 - c. Maintain comprehensive, timely, and legible medical records
 - d. Present effective teaching conferences using logical organization and appropriate audio-visual media.
 - e. Effectively teach and share literature resources with students, other residents, and referring physicians on an individual basis.