

Curriculum for Fellowship Instruction and Experience in Endocrinology, Diabetes, and Metabolism

Division of Endocrinology, Diabetes and Metabolism

Department of Medicine

University of Florida College of Medicine

Jacksonville, Florida

Curriculum for Fellowship Instruction and Experience in Endocrinology, Diabetes, and Metabolism

University of Florida Jacksonville Program

Table of Contents

Program Overview	page 3
Inpatient Consult Services	page 6
Outpatient Clinics	page 20
Conferences	page 42
Research Experience	page 44
Evaluations	page 46

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Overview of Program

The University of Florida Jacksonville Program provides the required 2 years of instruction and experience for board eligibility in Endocrinology, Diabetes and Metabolism. Each rotation and conference is designed to expand the fellow's expertise in at least one of the core competencies: 1. Medical Knowledge, 2. Patient Care, 3. Interpersonal Communication, 4. Professionalism, 5. Systems Based Practice, and 6. Problem Based Learning and Improvement.

Fellows rotate in the inpatient and outpatient clinical services of UF Health Jacksonville Medical Center.

During the inpatient rotations, fellows are expected to learn about the inpatient evaluation and management of various endocrine disorders as well as the appropriate transfer of patients to the outpatient setting. An attending physician supervises the fellow in all clinical encounters and is responsible for providing patient centered clinical teaching.

During the outpatient rotations, fellows are expected to learn about the outpatient evaluation and management of various endocrine disorders as well as delivering medical care to patients in the outpatient setting. Fellows are assigned to two continuity clinic sessions and rotating ambulatory clinical rotations. Fellows participate in thyroid ultrasound, ultrasound guided fine needle aspiration of the thyroid nodules, continuous glucose monitoring, insulin pump management, DXA reading, endocrine stimulation or suppression testing, and radioactive iodine ablation as part of these rotations. An attending physician supervises the fellow in all clinical encounters and is responsible for providing patient centered clinical teaching.

Overview of Rotations and Conferences
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Year 1

The first year of the Endocrinology/Metabolism Fellowship Program consists of intensive training in inpatient consult endocrinology. The fellows begin their continuity clinics where they follow their own general endocrinology patients with faculty preceptors. During the first year, fellows select research mentors and lay the groundwork for research projects.

Required Educational and Clinical Experiences:

Endocrinology Inpatient Consult Service:	6 months
Emerson Clinic (ambulatory experience):	3 months
Research rotation:	3 months

Year 2

The second year of the Endocrinology/Metabolism Fellowship Program consists of training in advanced outpatient endocrinology topics along with significant time allotted to primary research projects should the fellow desire this added experience. Alternatively, additional experience can be gained in the evaluation and management of ambulatory patient's in endocrinology.

Pediatric Endocrinology Clinic:	1 month
Reproductive Endocrinology Clinic: concurrent with stone clinic	1 month
Urology Stone Clinic: concurrent with reproductive	1 month
Endocrinology Inpatient Consult Service:	2 months
Emerson Clinic (ambulatory experience):	3 months
Research Project:	5 months

Programs ongoing throughout fellowship

General Endocrinology Continuity Clinic:	24 months
Endocrinology Grand Rounds/Research Series	monthly
Fellows' Core Curriculum Conference	weekly
Clinical Pearls	weekly
Fellows' Case Presentations	quarterly
Journal Club	quarterly
Board Review Conferences	semi-monthly
Multidisciplinary Thyroid Conferences	monthly
Multidisciplinary Neuro Conferences	monthly
Internal Medicine Grand Rounds	weekly
Diabetes Steering Committee	monthly
National subspecialty meeting	1 every 12 months

Additional Elective Educational and Clinical Experiences Available:

Additional experiences in Thyroid, Clinical Nutrition, Adrenal, Diabetes, Pediatric Endocrinology, or Reproductive Endocrinology Clinics

Surgical Endocrinology
Ophthalmology
Podiatry

INPATIENT CONSULT SERVICES

UF Health Jacksonville

Overview

Endocrine fellows participate fully in the inpatient clinical activities of the Section of Endocrinology while working under the direct supervision of an assigned faculty. Fellows are given the opportunity to make the initial interview, examination and assessment of both new and follow-up endocrine patients in the inpatient setting. Fellows are expected to review pathology specimens, radiographic studies, and clinical laboratory results generated as a result of their clinical encounter. Fellows discuss their findings and review their diagnostic and treatment plans with the supervising faculty. These discussions will include review of the clinical data, psychosocial patient environment, pathophysiology of disease processes, differential diagnosis, diagnostic approach, therapeutic options including a multidisciplinary approach and literature reviews. Through these case discussions, fellows will learn to assimilate key information and to develop a diagnostic and therapeutic strategy that is patient specific. Assigned and self-assigned literature reviews and reference readings enable the fellows to develop an evidence based approach to patient care.

In addition to rounds necessary for timely patient care, teaching rounds shall occur at least five times weekly.

Fellows also supervise the inpatient activities of the rotating residents and students. Fellows are required to review and confirm the history and physical findings of the rotator. As the first year of fellowship progresses, fellows are expected to mimic and conduct informal teaching rounds with the rotator (i.e. to review case findings, to discuss differential diagnosis and to develop a diagnostic and therapeutic strategy) prior to the formal case presentation. Fellows are encouraged to provide educational materials (e.g. review articles) to enhance the learning experience of the rotator as well as the consulting physicians.

Fellows are expected to provide call coverage for the outpatient endocrine service as needed. Fellows are expected to return all telephone calls, refill prescription requests, and review all test results by the completion of the work day. Fellows are expected address all critical issues and appropriately triage the remainder of encounters. The on-service attending supervises and educates the fellow assigned to this service. Through this activity, fellows learn how to triage patients (e.g. inpatient admission, telephone management) and how to address abnormal finding or patient questions in the outpatient setting. First year endocrine fellows divide the weekday call coverage. Both first and second year endocrine fellows provide weekend coverage.

Faculty

Joe Chehade, MD
Gunjan Gandhi, MD
Marilu Jurado, MD
Leena Shahla, MD
Kent Wehmeier, MD

Basic Rotation Description

For periods of one month each, the fellow will be assigned to one of the inpatient consult services and will be responsible for all inpatient and urgent outpatient consults during the work week. In addition, the fellow will take call every fourth weekend, averaged over the entire year. There are approximately 50 consults each month for the endocrinology service. The fellow will also be responsible for following any endocrinology/diabetes practice patient who is admitted to the inpatient service. The fellow will be responsible for documenting endocrine service/consult patient's progress daily. The fellow will be on call from home during the evenings of the work week and the assigned weekends, receiving calls about consults as well as providing coverage for the endocrinology/diabetes practice patients from UF Health. The endocrinology and diabetes consult attendings will be available at all times to the fellow for case discussion.

The inpatient consult services will consist of the fellow, the endocrinology (or diabetes) consult attending, internal medicine residents and fourth year medical students. In addition to regular rounds required for timely patient care (see separate policy), the consult attendings will meet at least five times weekly with the consult team for educational rounds. The meetings will consist of a combination of bedside teaching and didactic sessions. The didactic sessions will address the molecular/cell biology, physiology, epidemiology, pathology, diagnosis or therapy of the relevant disease.

Educational Goals and Objectives

1. To provide opportunities to diagnose / manage (as an endocrinology consultant) adult, adolescent, and pediatric inpatients. The patients' diseases will be of variable acuity and will present a wide variety of endocrine / metabolic manifestations.
2. To provide the opportunity to become proficient in the evaluation / management of endocrine emergencies including thyroid storm, myxedema coma, diabetic ketoacidosis, non-ketotic hyperosmolar diabetes, adrenal crisis, hyponatremia, hypercalcemia, and pituitary apoplexy.
3. To provide the opportunity to become proficient in the peri-operative management of endocrine disease.

4. To provide opportunities to interact with other specialties including surgery, nephrology, neurology, neurosurgery, obstetrics-gynecology, ophthalmology, pediatrics and urology.
5. To provide opportunities to assume responsibility for inpatient care of endocrinology and diabetes clinic patients.
6. To learn the appropriate utilization and interpretation of clinical laboratory, radionuclide and radiologic studies.
7. To provide opportunities to manage patient care by telephone and to learn to triage care appropriately.
8. To provide opportunities to lead the consult team and teach residents / students about the evaluation / therapy of endocrinologic disease.
9. To provide opportunities to see the endocrine adaptations / maladaptations to systemic illnesses, including the effects on the thyroidal, adrenal and gonadal axes.
10. To provide examples of the humanistic practice of medicine.

Core Competency Goals and Objectives

The inpatient consult service will prove a broad opportunity for intensive learning. As such it will be a vehicle for working on skills in Patient Care and Medical Knowledge. The complex environment will prove useful for improving Interpersonal Communication skills, for modeling Professionalism, and for developing skills in Systems Based Practice. There will be multiple opportunities for Problem Based Learning and Improvement as the fellow progresses from month to month over the course of year.

The competency based goals and objectives for the inpatient rotations are listed below. Fellows are expected to progressively master these competencies during the two year fellowship program. At the end of the two year endocrine fellowship program, fellows are expected to cultivate a broad differential diagnosis for each patient encounter, determine an appropriate diagnostic plan based on clinical findings and develop/implement a patient centered treatment plan that is evidence based. During these inpatient encounters, fellows are expected to assume primary clinical responsibility for their patients and to coordinate appropriate medical care in the inpatient setting. As the fellows progress in clinical training, they are expected to assume a greater responsibility for patient care and clinical decisions. The independence fostered by the fellowship program occurs under the supervision of an attending physician and fellows are expected to notify and discuss all clinical encounters with the supervising attending.

PATIENT CARE: Fellow must be able to provide patient care that is compassionate, appropriate and effective for the treatment of health problems and the promotion of health. During the first year of the fellowship, fellows are expected to become proficient in the gathering of appropriate history and physical exam data and to start assimilating an appropriate diagnostic and treatment plan. The fellows are expected to learn the fundamentals of endocrine pathophysiology as well as common diagnostic and therapeutic options. They are encouraged to

incorporate evidence based medicine into their practice. By the second year of fellowship, fellows are expected to play a greater role in the diagnostic and treatment decisions. They are expected to know and review the current endocrine literature prior to assimilating an appropriate diagnostic and treatment plan as well as take a leading role in communicating these decisions to patients and other health providers.

Goals	Objectives for PGY 4	Objectives for PGY5
1. Gather essential and accurate patient information	To obtain a complete history including a chief endocrine complaint, history of present illness, review of systems, past medical history, social history, family history, list of medications, and allergies.	To obtain a complete history and be able to include pertinent disease specific historical information i.e. the salient positive and negative findings
	To access old medical records and obtain information pertaining to previous hospitalizations, clinic visits, laboratory work and studies.	To independently access old medical records and obtain information pertaining to previous hospitalizations, clinic visits, laboratory work and studies.
	To perform a complete physical exam with a focus on physical findings pertinent to the endocrine system.	To perform a complete physical exam and be able to identify physical findings pertinent to the endocrine system.
2. Communicate appropriately and effectively	To present a history and physical exam in a clear and concise manner. To discuss the differential diagnosis and to start assimilating a diagnostic and therapeutic approach to patient care.	To present a history and physical exam in a clear and concise manner. To discuss the differential diagnosis and to identify a unifying diagnosis. To formulate and explain the diagnostic and therapeutic approach to patient care.
	To explain to patients and their families the nature of the disease, diagnostic approach, therapeutic options, potential side effects and expected course.	To independently and effectively communicate with patients and their families regarding the nature of the disease, diagnostic approach, therapeutic options, potential side effects and expected course.
	To communicate medical information to other health care providers in a verbal and written format such as chart notes, dictations and phone conversations.	To independently and effectively communicate medical information to other health care providers in a verbal and written format such as chart notes, dictations and phone conversations.
3. Make informed decisions about diagnostic and therapeutic interventions	To review current literature and gather pertinent information to guide diagnostic and therapeutic decisions.	To utilize current literature and pertinent clinical information to guide diagnostic and therapeutic decisions.
	To appropriately identify and consult subspecialty services and resources	To appropriately utilize consult subspecialty services and resources
	To elicit patient preference and negotiate an appropriate treatment plan.	To incorporate patient preference into the diagnostic and treatment plan.
	To analyze clinical data and prioritize patient's medical problems in order to identify an appropriate diagnostic/treatment plan.	To independently analyze clinical data and prioritize patient's medical problems in order to identify an appropriate diagnostic/treatment plan.
4. Develop and carry inpatient management plans.	To develop and implement plans for the diagnosis and management of endocrine diseases.	To independently develop and implement plans for the diagnosis and management of endocrine diseases.

	To monitor clinical progress by coordinating appropriate follow-up care.	To monitor clinical progress by independently coordinating appropriate follow-up care.
5. Competently perform procedures considered essential for endocrine practice	To perform specific endocrine procedures including radioactive iodine ablation and endocrine suppression and stimulation testing.	To competently perform specific endocrine procedures including radioactive iodine ablation and endocrine suppression and stimulation testing.
	To review test results and coordinate appropriate follow-up care	To interpret test results and coordinate appropriate follow-up care
	To keep an accurate and updated procedure log (e.g. thyroid biopsy)	To keep an accurate and updated procedure log (e.g. thyroid biopsy)
6. Work with other health care professionals to improve patient care	To interact effectively with other health care representatives including nutritionists, diabetes educators, insurance company representatives, pharmaceutical and medical device company representatives, pharmacists, nurses, and long term care facility managers in order to provide comprehensive patient care.	To independently coordinate comprehensive patient care by collaborating with other health care representatives including nutritionists, diabetes educators, insurance company representatives, pharmaceutical and medical device company representatives, pharmacists, nurses, and long term care facility managers
	To interact effectively with primary care providers as well as other medical and surgical specialties in order to provide comprehensive patient care	To independently coordinate comprehensive patient care by collaborating with primary care providers as well as other medical and surgical specialties.

MEDICAL KNOWLEDGE: Fellows must demonstrate knowledge of established and evolving biomedical, clinical, and cognate (e.g. epidemiological and social-behavioral) science and the application of this knowledge to patient care. During the first year of the fellowship, fellows are expected to become proficient in reviewing medical literature and assimilating a broad understanding of disease processes as well as diagnostic and therapeutic options. They are encouraged to incorporate scientific evidence into their clinical practice. By the second year of fellowship, fellows are expected to rapidly identify a unifying diagnosis and to develop an evidence based approach to patient care. They are expected to know and understand the current endocrine literature and play a leading role in communicating their understanding to patients and other health providers.

Goals	Objectives for PGY 4	Objectives for PGY5
1. Know and apply evidence based science to patient care.	To review both textbook and primary source literature in order to develop an understanding of various endocrine topics.	To review both textbook and primary source literature to maintain up to date understanding of various endocrine topics.
	To present and participate in endocrine conferences. These conferences cover topics a variety of endocrine topics including case discussions, journal review, and basic science.	To present and actively participate in endocrine conferences. These conferences cover topics a variety of endocrine topics including case discussions, journal review, and basic science. Fellows are expected to critically analyze and communicate during presentations.
	To understand the role of evidence based science to patient care decisions. .	To utilize evidence based science in patient care decisions. .

2. Demonstrate a scientific and analytical approach to patient care	To generate a differential diagnosis based on clinical evidence and to start assimilating an appropriate investigatory plan to determine a diagnosis.	To generate a differential diagnosis based on clinical evidence and to identify an appropriate investigatory plan to determine a diagnosis.
	To understand the various therapeutic options and to assimilate an appropriate treatment plan for each patient	To determine a unique treatment plan for each patient based on clinical data and patient preference.
	To effectively communicate their analytical approach to patient care via written chart notes, dictated letters, verbal communications with other health care providers and participation in clinical case conferences.	To independently and effectively communicate their analytical approach to patient care via written chart notes, dictated letters, verbal communications with other health care providers and participation in clinical case conferences.

PROFESSIONALISM: Both first and second year endocrine fellows must demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principals and sensitivity to diverse patient populations. By the second year, fellows are expected to recognize patient specific health challenges (e.g. race, gender, cultural back ground), to disclose all pertinent information (e.g. risk/benefit, conflict of interest) and to advocate for patients and their families. Adhering to professional standards, they are encouraged to facilitate discussions and to assist patients in their decision process. Second year fellows are expected to fulfill all clinical and academic responsibility in an exemplary fashion, thereby functioning as professional role models for other trainees.

Goals	Objectives for PGY 4	Objectives for PGY5
1. Demonstrate respect and integrity in their professional behavior	To learn to interact with patients, families and other health providers in a professional manner using appropriate verbal and nonverbal language.	To interact with patients/family members in a professional manner using appropriate verbal and nonverbal language.
	To know and avoid breach of the boundaries of the physician/patient relationship, including but not limited to strict avoidance of sexual or romantic suggestiveness or involvement with patients/family members.	To know and avoid breach of the boundaries of the physician/patient relationship, including but not limited to strict avoidance of sexual or romantic suggestiveness or involvement with patients/family members.
	To refrain at all times from any form of scientific misconduct in clinical practice, research, professional presentations, and publication.	To refrain at all times from any form of scientific misconduct in clinical practice, research, professional presentations, and publication.
2. Demonstrate compassion and responsiveness to the needs of patients and society that supercedes self interest	To place patient safety and care above all competing considerations without compromising their own safety or the safety of others that they are supervising.	To place patient safety and care above all competing considerations without compromising their own safety or the safety of others that they are supervising.
	To learn how to advocate for patients and their families.	To advocate for patients and their families.
3. Demonstrate accountability to patients, society, and the medical profession.	To recognize and support patient's rights to receive full information regarding the risks, benefits, and costs of various diagnostic and treatment options as well as any potential conflict of interest.	To recognize and disclose information regarding the risks, benefits and costs of various diagnostic and treatment options as well as any potential conflicts of interest.
	To truthfully report their medical errors to their attending or Risk Management. They	To truthfully report their medical errors to their attending or Risk Management.

	will follow hospital protocols in the face of errors.	They will follow hospital protocols in the face of errors.
	To seek professional help for personal impairments that may compromise patient care; will assist impaired colleagues to obtain professional help; and will take responsibility for interceding to protect patient safety when impaired colleagues do not respond appropriately to their own duties in this regard.	To seek professional help for personal impairments that may compromise patient care; will assist impaired colleagues to obtain professional help; and will take responsibility for interceding to protect patient safety when impaired colleagues do not respond appropriately to their own duties in this regard.
	To fulfill all clinical and academic responsibility in a timely manner	To fulfill all clinical and academic responsibility in a timely and exemplary fashion, thereby functioning as professional role models for other trainees.
4. Demonstrate a commitment to excellence and on-going professional development.	To attend professional development and continuing medical education activities.	To attend and participate regularly in professional development and continuing medical education activities.
5. Demonstrate a commitment to ethical principles pertaining to provision or withholding of clinical care, confidentiality of patient information, and business practices	To support patients and families in their decision to continue or withhold life-sustaining treatment in terminal conditions.	To support and facilitate decision to continue or withhold life-sustaining treatment in terminal conditions.
	To not reveal confidential communications or patient information to anyone not involved in the patient's care without the express consent of the patient/family, except where provided for by law (e.g. suspicion of abuse or neglect, or other mandatory reportable circumstances), or by the need to protect the welfare of the individual patient or the public interest.	To not reveal confidential communications or patient information to anyone not involved in the patient's care without the express consent of the patient/family, except where provided for by law (e.g. suspicion of abuse or neglect, or other mandatory reportable circumstances), or by the need to protect the welfare of the individual patient or the public interest.
	To understand the benefits and risks of all proposed diagnostic and therapeutic interventions.	To understand and inform patients and families of the benefits and risks of all proposed diagnostic and therapeutic interventions.
	To decline gifts or incentives of any kind from pharmaceutical or medical device companies (and their representatives) or from companies delivering medical care.	To decline gifts or incentives of any kind from pharmaceutical or medical device companies (and their representatives) or from companies delivering medical care.
6. Demonstrate sensitivity and responsiveness to patients' culture, age, gender, disabilities, religion, sexual preference, and other parameters of human diversity.	To make every effort to elicit and discuss differing religious and/or cultural needs and values in delivering medical care.	To make every effort to elicit and accommodate differing religious and/or cultural needs and values in delivering medical care– but are under no obligation to accommodate requests based upon any form of identity-group prejudice.
	To learn to use language that is neutral as to assumptions of gender, sexual preference, religion, race/ethnicity, etc. when making general comments and explanations.	To use language that is neutral as to assumptions of gender, sexual preference, religion, race/ethnicity, etc. when making general comments and explanations.

INTERPERSONAL AND COMMUNICATION SKILLS: Both first and second year fellows must demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals. Although first year fellows are expected to teach residents and students rotating on the endocrine service, educating physicians and trainees (e.g. first year endocrine fellows) is an important function of the second year endocrine fellows. The expectations in terms of content and delivery of oral and written communications are greater for second year fellows. They are expected independently solicit information, facilitate patient care and communicate effectively with all appropriate parties.

Goals	Objectives for PGY 4	Objectives for PGY5
1. Create and sustain a therapeutic and ethically sound relationship with patients.	To learn to approach patients and their families with a friendly, interested, and respectful demeanor.	To approach patients and their families with a friendly, interested, and respectful demeanor.
	To scrupulously maintain patient confidentiality.	To scrupulously maintain patient confidentiality.
	To know and be able to describe the proper boundaries of the physician/patient relationship, and will consistently and conscientiously avoid any breach of these boundaries.	To know and be able to describe the proper boundaries of the physician/patient relationship, and will consistently and conscientiously avoid any breach of these boundaries.
2. Communicate effectively with patients and their families	To learn to make explanations in clear and simple language, avoiding use of medical jargon.	To make explanations in clear and simple language, avoiding use of medical jargon.
	To learn to work with translator services for optimal and appropriate patient care.	To work with translator services for optimal and appropriate patient care.
3. Work effectively with members of the health care team and professional group	To learn to communicate in patient charts and physician letters i.e. in a manner that is legible and permits subsequent caregivers to understand the nature of the patient interaction and the diagnostic/treatment plan.	To communicate effectively in patient charts and physician letters i.e. in a manner that is legible and permits subsequent caregivers to understand the nature of the patient interaction and the diagnostic/treatment plan.
	To learn to verbally communicate with other members of the health care team in order to facilitate patient care.	To verbally communicate effectively with other members of the health care team in order to facilitate patient care.
	Fellows will act as a teacher to medical students and residents rotating on the endocrine service.	Fellows will educate medical students and residents rotating on the endocrine service as well as first year endocrine fellows and consulting physicians.
	To actively seek the advice and knowledge of the attending physician to enhance patient care	To actively and independently seek the advice and knowledge of the attending physician as well as

		health providers in other departments and in other fields to enhance patient care as appropriate.
4. Communicate effectively during formal presentations	To prepare and present in fellow conferences utilizing clear and succinct verbal language. These presentations are aimed at educating fellows, residents and students rotating on the endocrine service.	To prepare and present in fellow conferences utilizing clear and succinct verbal language. These presentations are aimed at educating not only trainees rotating on the endocrine service but also the faculty.
	To utilize power point slides to communicate the goals and objectives of the presentation.	To effectively utilize power point slides to communicate the goals and objectives of the presentation.

PRACTICE BASED LEARNING AND IMPROVEMENT: Fellows must be able to investigate and evaluate their patient care practices, appraise and assimilate scientific evidence, and improve their patient care practice. During the first year of fellowship, fellows are taught to identify gaps in their knowledge base or clinical skills. They are encouraged seek feedback and improve on deficiencies. They are expected to review textbooks and medical literature on a regular basis and to incorporate new information into their clinical practice and educational endeavors. The expectation for second year fellows is more rigorous. They are expected constantly and independently review their clinical practice and update their knowledge base and clinical skills. They are expected to be proficient in identifying source literature and disseminating new information. Critical review scientific data and evidence based approach to patient care is an expectation of second year fellows.

Goals	Objectives for PGY 4	Objectives for PGY5
1. Analyze, evaluate and improve practice performance, skill, and style.	To identify and improve gaps in knowledge based upon experience and feedback.	To independently identify and eliminates gaps in knowledge based upon experience, introspective awareness, and feedback.
	To regularly review both textbook and primary source literature in order to understand topics that have arisen in practice.	To regularly review both textbook and primary source literature in order to maintain an up to date understanding of endocrine topics.
	To seek feedback and to start incorporating changes based on the feedback.	To seek feedback and implement changes based on the feedback.
2. Locate, assess, and assimilate evidence and relevant information	To review scientific literature, assimilate data, and disseminate information to improve their practice and the health care of their patients	To review scientific literature, appraise quality, assimilate data and disseminate information to improve their practice and the health care of their patients

	To increase awareness of medical information that directly impacts their practice and their patients.	To maintain an up to date awareness of medical information that directly impacts their practice and their patients.
3. Effectively use information technology to access and manage on- line medical information to support their education and expertise.	To gain expertise in literature search methodologies using standard web-based search engines such as Ovid, MD Consult, Pubmed.	To become proficient in literature search methodologies using standard web-based search engines such as Ovid, MD Consult, Pubmed.
	To gain familiarity with a variety of computer and hand-held computer based resources for looking up medications, dosing, and other topics of use to the general endocrine.	To become proficient in a variety of computer and hand-held computer based resources for looking up medications, dosing, and other topics of use to the general endocrine.
4. Actively participate in conferences and peer discussions	To take a proactive and interactive approach during conference e.g. to “think out loud”, to ask for clarification and guidance, and to seek input on their practice and knowledge base.	To take a proactive and interactive approach during conferences e.g. to “think out loud”, to ask for clarification and guidance, to seek input on their practice and knowledge base, and to critically examine and comment on the information being presented.
	To prepare, present and participate during clinical conferences.	To prepare, present and actively participate during clinical conferences.

SYSTEM BASED PRACTICE: Fellow must demonstrate 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. First year fellows must learn about the various health systems and how to work within each system. Second year fellows should be able to navigate different health system and be able to facilitate optimal medical care. They should be able to identify system problems and implement strategies to improve patient care.

Goals	Objectives for PGY 4	Objectives for PGY5
1. Effectively coordinate patient care in various health care delivery settings and systems.	To provide patient care in different clinical settings (e.g. RIH or VAMC) and within different systems (e.g. insured, underinsured, or free health delivery system).	To effectively provide patient care in different clinical settings (e.g. RIH or VAMC) and within different systems (e.g. insured, underinsured, or free health delivery systems).
	To work with a multidisciplinary team of health care professionals including physicians, nurses, long term care facilities, VNA, social workers, and foreign language interpreters.	To effectively work with a multidisciplinary team of health care professionals including physicians, nurses, long term care facilities, VNA, social workers, and foreign language interpreters.
2. Know how different medical practice styles and delivery	To learn how to provide cost-effective and quality patient care for	To effectively provide cost-effective and quality patient care for

systems influence resource allocation and health care costs.	a variety of patient problems utilizing different health delivery systems without compromising quality of care	a variety of patient problems utilizing different health delivery systems without compromising quality of care
	To understand health delivery in various systems such as insurance plans, hospital systems, etc and to evaluate how different conditions influence their patient care.	To understand and navigate health care delivery in various systems such as insurance plans, hospital systems, etc. in order to optimize patient care.
3. Advocate for quality patient care and assist patients in dealing with system based complexities.	To learn about how different health systems, programs and protocols impact patient care and to use them appropriately. Avoid harmful strategies.	To effectively navigate different health systems, programs and protocols. Avoid harmful strategies.
	To interact and advocate for patient resources with other physicians, ancillary caregivers, schools, landlords, and insurance companies.	To interact and advocate effectively for patient resources with other physicians, ancillary caregivers, schools, landlords, and insurance companies.
	To identify problems and complexities in the health care system and to help patients navigate the system.	To identify problems and complexities in the health care system and to help patients navigate the system. Furthermore, fellows are expected to identify, design and implement solutions to system problems and complexities that improve patient care.
4. Learn to partner with other health care providers to assess, coordinate, and improve health care.	To learn how and when to refer patients to other health care specialists and to communicate effectively with them.	To appropriately refer patients to other health care specialists and to communicate effectively with them.
	To maintain communication with other health care providers via telephone, chart notes, and letters.	To maintain effective communication with other health care providers via telephone, chart notes, and letters.
	To know when and how use specialty consults including such non-medical resources as Social Work, the hospital Ethics Committee, legal referral services, Risk Management, etc.	To master the logistics and use of specialty consults including such non-medical resources as Social Work, the hospital Ethics Committee, legal referral services, Risk Management, etc.

Educational Content

1) Diseases:

There are a wide variety of endocrinologic / metabolic diseases of varying severity and acuity. UF Health Jacksonville is a major tertiary and primary care facility. UF Health is a referral site for neighborhood health centers and a referral site for several community hospitals.

The diseases encountered by fellows on the endocrine service are representative of the full spectrum of endocrine disorders encountered in the inpatient setting including, but not limited to, thyroid disease, pituitary dysfunction, adrenal disorders, diabetes mellitus, hypoglycemia, lipid disorders, and calcium disorders.

Specific Diseases encountered and aspects addressed during the fellowship include:

1. Cushing's Syndrome, with an emphasis on the biochemical diagnosis and management pre and post operatively.
2. Incidentally discovered adrenal masses, stressing the differential diagnosis, follow-up and interventional indications.
3. Addison's disease, focused on the detection and both acute as well as chronic management.
4. Pheochromocytoma, including the detection of false positive screening tests forwarded by primary care physicians, confirming the biochemical presence of this tumor and appropriate pre-operative localization and management.
5. Primary hyperaldosteronism highlighting the strategies for diagnosis and treatment.
6. Appropriate application and follow-up of androgen treatment in hypogonadal men.
7. Pituitary Tumors: as they present, what they represent, how they are preoperatively evaluated, prepared and post operatively managed.
8. The evaluation, etiology, assessment and confirmation of thyroid hormone deficiency and excess states as well as the appropriate medical intervention and follow-up.
9. Thyroid cancer of all kinds, from initial evaluation to operative selection and preparation and postoperative treatment with long-term surveillance.
10. Calcium metabolism disorders including the recognition, documentation and etiologic differentiation of both hyper and hypocalcemia. This includes developing skill in the acute and chronic management of these conditions.
11. Recognition of both Osteoporosis and Paget's disease by means of radiographic, biochemical and clinical risk factor evaluation. Assessment of the need for intervention and appropriate clinical monitoring of progress.
12. Type 1, Type 2 and various forms of Secondary Diabetes Mellitus, including expert diagnosis, complication assessment, and management.
13. Simple obesity recognition, assessment and intervention to prevent progression of well-described complications.
14. The assessment, understanding and treatment of all forms of dyslipidemia.
15. Evaluation and management of hypoglycemia of all etiologies.
16. Evaluation and management of gender identity disorders.
17. Other topics presenting on the inpatient service of the UF Health Medical Center.

2) Patient Characteristics:

The patient population consists of both genders and varying ages (from pediatric to geriatric ages). The patient population is socioeconomically diverse. It is also culturally and ethnically diverse, consisting of African Americans, Haitians, Latinos, Caucasians, Southeast Asians and various other ethnic minorities.

3) Procedures:

Special diagnostic testing, when indicated, will be performed under the consult attending's supervision. Standard procedures where it is anticipated that fellows will develop appropriate proficiency include:

1. ACTH stimulation testing – for the diagnosis of hypoadrenalism and congenital adrenal hyperplasia.
2. Dexamethasone suppression testing – for the etiology of hypercortisolism
3. Water deprivation testing – for the diagnosis of diabetes insipidus
4. Glucose tolerance testing – for the diagnosis of diabetes mellitus
5. Glucose Growth Hormone suppression testing – for the diagnosis of acromegaly
6. Fine needle aspiration biopsy of the thyroid
7. Diagnostic ultrasound of the thyroid

Optional procedures which may be performed include

1. 72 hour fasting – for the diagnosis of hypoglycemic disorders
2. Insulin tolerance testing – for the diagnosis of adrenal and pituitary dysfunction

4) Pathologic Material

Cytologic material from fine needle aspiration biopsy of the thyroid is evaluated regularly in conjunction with the Pathology Department. Surgical pathologic specimens, including adrenal tissue, thyroid tissue, pituitary tissue, pancreatic tissue, and other endocrine tumor tissue are also evaluated with the Pathology Department as needed.

5) Reading materials/ Other resources:

Fellowship Training Series Endocrine Society
Becker: Principles of Endocrinology
DeGroot: Textbook of Endocrinology
Joslin's Diabetes Mellitus
Braverman and Utiger: The Thyroid
Favus: Primer on the Metabolic Bone Diseases and Disorders of Mineral Metabolism
<http://www.thyroidmanager.org>
<http://www.diabetes.org>

6) Teaching Methods:

Fellows present each case to the consult attending after the initial evaluation. All aspects of clinical diagnosis, evaluation and management are discussed and reviewed at this time. The consult attending will also review and confirm any pertinent physical findings. Results of laboratory, radionuclide, radiologic and pathologic studies will be reviewed and their interpretations discussed. All management decisions are made in conjunction with the consult attending physician. As their training progresses, fellows are allowed more autonomy in the development of diagnostic and therapeutic plans, but are still required to review all decisions and recommendations with the consult attending at the time of the patient visits. Pediatric cases will be reviewed with the pediatric endocrinologist.

7) Milestones

As established by the ACGME milestones were set up in the clinical learning environment. For endocrinology these milestones include thyroid ultrasound thyroid fine-needle aspiration dual energy x-ray absorptiometry, continuous subcutaneous insulin infusion and continuous glucose monitoring. These are reviewed by the faculty and recorded into the New Innovation system for monitoring purposes

Evaluation

Program performance: Fellows are asked to evaluate their experience at the end of each rotation. For each rotation and faculty member, fellows provide direct feedback to faculty, confidential feedback to the program director, and written anonymous feedback via the program coordinator.

Fellow performance: Attending physicians provide ongoing feedback and guidance on clinical issues and fellow performance. After each rotation, faculty complete a standard fellow evaluation form incorporating an assessment of the fellow's activities during the rotation.

In addition, fellows receive annual feedback from patients, clinic staff, and peers. Fellows also receive verbal synthesis of the feedback from the program director every 6 months.

OUTPATIENT CLINICS

General Core Competency Goals and Objectives for all Clinics

Introduction:

The **outpatient** clinics will prove a broad opportunity for intensive learning. As such it will be a vehicle for working on skills in Patient Care and Medical Knowledge. The complex environment will prove useful for improving Interpersonal Communication skills, for modeling Professionalism, and for developing skills in Systems Based Practice. There will be multiple opportunities for Problem Based Learning and Improvement as the fellow progresses from month to month over the course of year.

As a fellow-driven clinic, the continuity clinic will address all 6 of the above core competencies well. The faculty led specialized clinics will put more emphasis on skills in Patient Care, Medical Knowledge, Interpersonal Communication, and Professionalism. That said, the faculty led clinics will provide opportunities for modeling the latter two competencies also.

Fellows are expected to progressively master the competencies during the two year fellowship program. At the end of the two year endocrine fellowship program, fellows are expected to cultivate a broad differential diagnosis for each patient encounter, determine an appropriate diagnostic plan based on clinical findings and develop/implement a patient centered treatment plan that is evidence based. During these outpatient encounters, fellows are expected to assume primary clinical responsibility for their patients and to coordinate appropriate medical care in the outpatient setting. As the fellows progress in clinical training, they are expected to assume a greater responsibility for patient care and clinical decisions. The independence fostered by the fellowship program occurs under the supervision of an attending physician and fellows are expected to notify and discuss all clinical encounters with the supervising attending.

PATIENT CARE: Fellow must be able to provide patient care that is compassionate, appropriate and effective for the treatment of health problems and the promotion of health. During the first year of the fellowship, fellows are expected to become proficient in the gathering of appropriate history and physical exam data and to start assimilating an appropriate diagnostic and treatment plan. The fellows are expected to learn the fundamentals of endocrine pathophysiology as well as common diagnostic and therapeutic options. They are encouraged to incorporate evidence based medicine into their practice. By the second year of fellowship, fellows are expected to play a greater role in the diagnostic and treatment decisions. They are expected to know and review the current endocrine literature prior to assimilating an appropriate diagnostic and treatment plan as well as take a leading role in communicating these decisions to patients and other health providers.

Goals	Objectives for PGY 4	Objectives for PGY5
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1. Gather essential and accurate patient information	To obtain a complete history including a chief endocrine complaint, history of present illness, review of systems, past medical history, social history, family history, list of medications, and allergies.	To obtain a complete history and be able to include pertinent disease specific historical information i.e. the salient positive and negative findings
	To access old medical records and obtain information pertaining to previous hospitalizations, clinic visits, laboratory work and studies.	To independently access old medical records and obtain information pertaining to previous hospitalizations, clinic visits, laboratory work and studies.
	To perform a complete physical exam with a focus on physical findings pertinent to the endocrine system.	To perform a complete physical exam and be able to identify physical findings pertinent to the endocrine system.
2. Communicate appropriately and effectively	To present a history and physical exam in a clear and concise manner. To discuss the differential diagnosis and to start assimilating a diagnostic and therapeutic approach to patient care.	To present a history and physical exam in a clear and concise manner. To discuss the differential diagnosis and to identify a unifying diagnosis. To formulate and explain the diagnostic and therapeutic approach to patient care.
	To explain to patients and their families the nature of the disease, diagnostic approach, therapeutic options, potential side effects and expected course.	To independently and effectively communicate with patients and their families regarding the nature of the disease, diagnostic approach, therapeutic options, potential side effects and expected course.
	To communicate medical information to other health care providers in a verbal and written format such as chart notes, dictations and phone conversations.	To independently and effectively communicate medical information to other health care providers in a verbal and written format such as chart notes, dictations and phone conversations.
3. Make informed decisions about diagnostic and therapeutic interventions	To review current literature and gather pertinent information to guide diagnostic and therapeutic decisions.	To utilize current literature and pertinent clinical information to guide diagnostic and therapeutic decisions.
	To appropriately identify and consult subspecialty services and resources	To appropriately utilize consult subspecialty services and resources
	To elicit patient preference and negotiate an appropriate treatment plan.	To incorporate patient preference into the diagnostic and treatment plan.
	To analyze clinical data and prioritize patient's medical problems in order to identify an appropriate diagnostic/treatment plan.	To independently analyze clinical data and prioritize patient's medical problems in order to identify an appropriate diagnostic/treatment plan.
4. Develop and carry outpatient management plans.	To develop and implement plans for the diagnosis and management of endocrine diseases.	To independently develop and implement plans for the diagnosis and management of endocrine diseases.
	To monitor clinical progress by coordinating appropriate follow-up care via telephone or office visits.	To monitor clinical progress by independently coordinating appropriate follow-up care via telephone or office visits.
5. Competently perform procedures considered essential for endocrine practice	To perform specific endocrine procedures including thyroid nodule biopsy, radioactive iodine ablation, endocrine suppression and stimulation testing, bone density reading, and insulin pump management.	To competently perform specific endocrine procedures including thyroid nodule biopsy, radioactive iodine ablation, endocrine suppression and stimulation testing, bone density reading, and insulin pump management.

	To review test results and coordinate appropriate follow-up care	To interpret test results and coordinate appropriate follow-up care
	To keep an accurate and updated procedure log (e.g. thyroid biopsy)	To keep an accurate and updated procedure log (e.g. thyroid biopsy)
6. Work with other health care professionals to improve patient care	To interact effectively with other health care representatives including nutritionists, diabetes educators, insurance company representatives, pharmaceutical and medical device company representatives, pharmacists, nurses, and long term care facility managers in order to provide comprehensive patient care.	To independently coordinate comprehensive patient care by collaborating with other health care representatives including nutritionists, diabetes educators, insurance company representatives, pharmaceutical and medical device company representatives, pharmacists, nurses, and long term care facility managers
	To interact effectively with primary care providers as well as other medical and surgical specialties in order to provide comprehensive patient care	To independently coordinate comprehensive patient care by collaborating with primary care providers as well as other medical and surgical specialties.

MEDICAL KNOWLEDGE: Fellows must demonstrate knowledge of established and evolving biomedical, clinical, and cognate (e.g. epidemiological and social-behavioral) science and the application of this knowledge to patient care. During the first year of the fellowship, fellows are expected to become proficient in reviewing medical literature and assimilating an broad understanding of disease processes as well as diagnostic and therapeutic options. They are encouraged to incorporate scientific evidence into their clinical practice. By the second year of fellowship, fellows are expected to rapidly identify a unifying diagnosis and to develop an evidence based approach to patient care. They are expected to know and understand the current endocrine literature and play a leading role in communicating their understanding to patients and other health providers.

Goals	Objectives for PGY 4	Objectives for PGY5
1. Know and apply evidence based science to patient care.	To review both textbook and primary source literature in order to develop an understanding of various endocrine topics.	To review both textbook and primary source literature to maintain up to date understanding of various endocrine topics.
	To present and participate in endocrine conferences. These conferences cover topics a variety of endocrine topics including case discussions, journal review, and basic science.	To present and actively participate in endocrine conferences. These conferences cover topics a variety of endocrine topics including case discussions, journal review, and basic science. Fellows are expected to critically analyze and communicate during presentations.
	To understand the role of evidence based science to patient care decisions. .	To utilize evidence based science in patient care decisions. .
2. Demonstrate a scientific and analytical approach to patient care	To generate a differential diagnosis based on clinical evidence and to start assimilating an appropriate investigatory plan to determine a diagnosis.	To generate a differential diagnosis based on clinical evidence and to identify an appropriate investigatory plan to determine a diagnosis.
	To understand the various therapeutic options and to assimilate an appropriate treatment plan for each patient	To determine a unique treatment plan for each patient based on clinical data and patient preference.

	To effectively communicate their analytical approach to patient care via written chart notes, dictated letters, verbal communications with other health care providers and participation in clinical case conferences.	To independently and effectively communicate their analytical approach to patient care via written chart notes, dictated letters, verbal communications with other health care providers and participation in clinical case conferences.
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PROFESSIONALISM: Both first and second year endocrine fellows must demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principals and sensitivity to diverse patient populations. By the second year, fellows are expected to recognize patient specific health challenges (e.g. race, gender, cultural back ground), to disclose all pertinent information (e.g. risk/benefit, conflict of interest) and to advocate for patients and their families. Adhering to professional standards, they are encouraged to facilitate discussions and to assist patients in their decision process. Second year fellows are expected to fulfill all clinical and academic responsibility in an exemplary fashion, thereby functioning as professional role models for other trainees.

Goals	Objectives for PGY 4	Objectives for PGY5
1. Demonstrate respect and integrity in their professional behavior	To learn to interact with patients, families and other health providers in a professional manner using appropriate verbal and nonverbal language.	To interact with patients/family members in a professional manner using appropriate verbal and nonverbal language.
	To know and avoid breach of the boundaries of the physician/patient relationship, including but not limited to strict avoidance of sexual or romantic suggestiveness or involvement with patients/family members.	To know and avoid breach of the boundaries of the physician/patient relationship, including but not limited to strict avoidance of sexual or romantic suggestiveness or involvement with patients/family members.
	To refrain at all times from any form of scientific misconduct in clinical practice, research, professional presentations, and publication.	To refrain at all times from any form of scientific misconduct in clinical practice, research, professional presentations, and publication.
2. Demonstrate compassion and responsiveness to the needs of patients and society that supercedes self interest	To place patient safety and care above all competing considerations without compromising their own safety or the safety of others that they are supervising.	To place patient safety and care above all competing considerations without compromising their own safety or the safety of others that they are supervising.
	To learn how to advocate for patients and their families.	To advocate for patients and their families.
3. Demonstrate accountability to patients, society, and the medical profession.	To recognize and support patient's rights to receive full information regarding the risks, benefits, and costs of various diagnostic and treatment options as well as any potential conflict of interest.	To recognize and disclose information regarding the risks, benefits and costs of various diagnostic and treatment options as well as any potential conflicts of interest.
	To truthfully report their medical errors to their attending or Risk Management. They will follow hospital protocols in the face of errors.	To truthfully report their medical errors to their attending or Risk Management. They will follow hospital protocols in the face of errors.

	To seek professional help for personal impairments that may compromise patient care; will assist impaired colleagues to obtain professional help; and will take responsibility for interceding to protect patient safety when impaired colleagues do not respond appropriately to their own duties in this regard.	To seek professional help for personal impairments that may compromise patient care; will assist impaired colleagues to obtain professional help; and will take responsibility for interceding to protect patient safety when impaired colleagues do not respond appropriately to their own duties in this regard.
	To fulfill all clinical and academic responsibility in a timely manner	To fulfill all clinical and academic responsibility in a timely and exemplary fashion, thereby functioning as a professional role models for other trainees.
4. Demonstrate a commitment to excellence and on-going professional development.	To attend professional development and continuing medical education activities.	To attend and participate regularly in professional development and continuing medical education activities.
5. Demonstrate a commitment to ethical principles pertaining to provision or withholding of clinical care, confidentiality of patient information, and business practices	To support patients and families in their decision to continue or withhold life-sustaining treatment in terminal conditions.	To support and facilitate decision to continue or withhold life-sustaining treatment in terminal conditions.
	To not reveal confidential communications or patient information to anyone not involved in the patient's care without the express consent of the patient/family, except where provided for by law (e.g. suspicion of abuse or neglect, or other mandatory reportable circumstances), or by the need to protect the welfare of the individual patient or the public interest.	To not reveal confidential communications or patient information to anyone not involved in the patient's care without the express consent of the patient/family, except where provided for by law (e.g. suspicion of abuse or neglect, or other mandatory reportable circumstances), or by the need to protect the welfare of the individual patient or the public interest.
	To understand the benefits and risks of all proposed diagnostic and therapeutic interventions.	To understand and inform patients and families of the benefits and risks of all proposed diagnostic and therapeutic interventions.
	To decline gifts or incentives of any kind from pharmaceutical or medical device companies (and their representatives) or from companies delivering medical care.	To decline gifts or incentives of any kind from pharmaceutical or medical device companies (and their representatives) or from companies delivering medical care.
6. Demonstrate sensitivity and responsiveness to patients' culture, age, gender, disabilities, religion, sexual preference, and other parameters of human diversity.	To make every effort to elicit and discuss differing religious and/or cultural needs and values in delivering medical care.	To make every effort to elicit and accommodate differing religious and/or cultural needs and values in delivering medical care– but are under no obligation to accommodate requests based upon any form of identity-group prejudice.
	To learn to use language that is neutral as to assumptions of gender, sexual preference, religion, race/ethnicity, etc. when making general comments and explanations.	To use language that is neutral as to assumptions of gender, sexual preference, religion, race/ethnicity, etc. when making general comments and explanations.

INTERPERSONAL AND COMMUNICATION SKILLS: Both first and second year fellows must demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals. Although first year fellows are expected to teach residents and students rotating on the endocrine

service, educating physicians and trainees (e.g. first year endocrine fellows) is an important function of the second year endocrine fellows. The expectations in terms of content and delivery of oral and written communications are greater for second year fellows. They are expected independently solicit information, facilitate patient care and communicate effectively with all appropriate parties.

Goals	Objectives for PGY 4	Objectives for PGY5
1. Create and sustain a therapeutic and ethically sound relationship with patients.	To learn to approach patients and their families with a friendly, interested, and respectful demeanor.	To approach patients and their families with a friendly, interested, and respectful demeanor.
	To scrupulously maintain patient confidentiality.	To scrupulously maintain patient confidentiality.
	To know and be able to describe the proper boundaries of the physician/patient relationship, and will consistently and conscientiously avoid any breach of these boundaries.	To know and be able to describe the proper boundaries of the physician/patient relationship, and will consistently and conscientiously avoid any breach of these boundaries.
2. Communicate effectively with patients and their families	To learn to make explanations in clear and simple language, avoiding use of medical jargon.	To make explanations in clear and simple language, avoiding use of medical jargon.
	To learn to work with translator services for optimal and appropriate patient care.	To work with translator services for optimal and appropriate patient care.
3. Work effectively with members of the health care team and professional group	To learn to communicate in patient charts and physician letters i.e. in a manner that is legible and permits subsequent caregivers to understand the nature of the patient interaction and the diagnostic/treatment plan.	To communicate effectively in patient charts and physician letters i.e. in a manner that is legible and permits subsequent caregivers to understand the nature of the patient interaction and the diagnostic/treatment plan.
	To learn to verbally communicate with other members of the health care team in order to facilitate patient care.	To verbally communicate effectively with other members of the health care team in order to facilitate patient care.
	Fellows will act as a teacher to medical students and residents rotating on the endocrine service.	Fellows will act as a teacher to medical students and residents rotating on the endocrine service as well as to the first year endocrine fellows and consulting physicians.
	To actively seek the advice and knowledge of the attending physician to enhance patient care	To actively and independently seek the advice and knowledge of the attending physician as well as health providers in other departments and in other fields to enhance patient care as appropriate.

4. Communicate effectively during formal presentations	To prepare and present in fellow conferences utilizing clear and succinct verbal language. These presentations are aimed at educating fellows, residents and students rotating on the endocrine service.	To prepare and present in fellow conferences utilizing clear and succinct verbal language. These presentations are aimed at educating not only trainees rotating on the endocrine service but also the faculty.
	To utilize power point slides to communicate the goals and objectives of the presentation.	To effectively utilize power point slides to communicate the goals and objectives of the presentation.

PRACTICE BASED LEARNING AND IMPROVEMENT: Fellows must be able to investigate and evaluate their patient care practices, appraise and assimilate scientific evidence, and improve their patient care practice. During the first year of fellowship, fellows are taught to identify gaps in their knowledge base or clinical skills. They are encouraged seek feedback and improve on deficiencies. They are expected to review textbooks and medical literature on a regular basis and to incorporate new information into their clinical practice and educational endeavors. The expectation for second year fellows is more rigorous. They are expected constantly and independently review their clinical practice and update their knowledge base and clinical skills. They are expected to be proficient in identifying source literature and disseminating new information. Critical review scientific data and evidence based approach to patient care is an expectation of second year fellows.

Goals	Objectives for PGY 4	Objectives for PGY5
1. Analyze, evaluate and improve practice performance, skill, and style.	To identify and improve gaps in knowledge based upon experience and feedback.	To independently identify and eliminates gaps in knowledge based upon experience, introspective awareness, and feedback.
	To regularly review both textbook and primary source literature in order to understand topics that have arisen in practice.	To regularly review both textbook and primary source literature in order to maintain an up to date understanding of endocrine topics.
	To seek feedback and to start incorporating changes based on the feedback.	To seek feedback and implement changes based on the feedback.
2. Locate, assess, and assimilate evidence and relevant information	To review scientific literature, assimilate data, and disseminate information to improve their practice and the health care of their patients	To review scientific literature, appraise quality, assimilate data and disseminate information to improve their practice and the health care of their patients
	To increase awareness of medical information that directly impacts their practice and their patients.	To maintain an up to date awareness of medical information that directly impacts their practice and their patients.
3. Effectively use information technology to access and manage on-line medical information to support their education and expertise.	To gain expertise in literature search methodologies using standard web-based search engines such as Ovid, MD Consult, Pubmed.	To become proficient in literature search methodologies using standard web-based search engines such as Ovid, MD Consult, Pubmed.

	To gain familiarity with a variety of computer and hand-held computer based resources for looking up medications, dosing, and other topics of use to the general endocrine.	To become proficient in a variety of computer and hand-held computer based resources for looking up medications, dosing, and other topics of use to the general endocrine.
4. Actively participate in conferences and peer discussions	To take a proactive and interactive approach during conference e.g. to “think out loud”, to ask for clarification and guidance, and to seek input on their practice and knowledge base.	To take a proactive and interactive approach during conferences e.g. to “think out loud”, to ask for clarification and guidance, to seek input on their practice and knowledge base, and to critically examine and comment on the information being presented.
	To prepare, present and participate during clinical conferences.	To prepare, present and actively participate during clinical conferences.

SYSTEM BASED PRACTICE: Fellow must demonstrate 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. First year fellows must learn about the various health systems and how to work within each system. Second year fellows should be able to navigate different health system and be able to facilitate optimal medical care. They should be able to identify system problems and implement strategies to improve patient care.

Goals	Objectives for PGY 4	Objectives for PGY5
1. Effectively coordinate patient care in various health care delivery settings and systems.	To provide patient care in different clinical settings (e.g. outpatient clinical visits, telephone management) and within different systems (e.g. insured, underinsured, or free health delivery system).	To effectively provide patient care in different clinical settings (e.g. outpatient clinical visits, telephone management) and within different systems (e.g. insured, underinsured, or free health delivery systems).
	To work with a multidisciplinary team of health care professionals including physicians, nurses, long term care facilities, VNA, social workers, and foreign language interpreters.	To effectively work with a multidisciplinary team of health care professionals including physicians, nurses, long term care facilities, VNA, social workers, and foreign language interpreters.
2. Know how different medical practice styles and delivery systems influence resource allocation and health care costs.	To learn how to provide cost-effective and quality patient care for a variety of patient problems utilizing different health delivery systems without compromising quality of care	To effectively provide cost-effective and quality patient care for a variety of patient problems utilizing different health delivery systems without compromising quality of care
	To understand health delivery in various systems such as insurance plans, hospital systems, etc and to evaluate how different conditions influence their patient care.	To understand and navigate health care delivery in various systems such as insurance plans, hospital systems, etc. in order to optimize patient care.

3. Advocate for quality patient care and assist patients in dealing with system based complexities.	To learn about how different health systems, programs and protocols impact patient care and to use them appropriately. Avoid harmful strategies.	To effectively navigate different health systems, programs and protocols. Avoid harmful strategies.
	To interact and advocate for patient resources with other physicians, ancillary caregivers, schools, landlords, and insurance companies.	To interact and advocate effectively for patient resources with other physicians, ancillary caregivers, schools, landlords, and insurance companies.
	To identify problems and complexities in the health care system and to help patients navigate the system.	To identify problems and complexities in the health care system and to help patients navigate the system. Furthermore, fellows are expected to identify, design and implement solutions to system problems and complexities that improve patient care.
4. Learn to partner with other health care providers to assess, coordinate, and improve health care.	To learn how and when to refer patients to other health care specialists and to communicate effectively with them.	To appropriately refer patients to other health care specialists and to communicate effectively with them.
	To maintain communication with other health care providers via telephone, chart notes, and letters.	To maintain effective communication with other health care providers via telephone, chart notes, and letters.
	To know when and how use specialty consults including such non-medical resources as Social Work, the hospital Ethics Committee, legal referral services, Risk Management, etc.	To master the logistics and use of specialty consults including such non-medical resources as Social Work, the hospital Ethics Committee, legal referral services, Risk Management, etc.

Evaluation

Program performance: Fellows are asked to evaluate their experience at the end of each rotation. For each rotation and faculty member, fellows provide direct feedback to faculty, confidential feedback to the program director, and written anonymous feedback via the program coordinator.

Fellow performance: Attending physicians provide ongoing feedback and guidance on clinical issues and fellow performance. After each rotation, faculty complete a standard fellow evaluation form incorporating an assessment of the fellow's activities during the rotation.

In addition, fellows receive annual feedback from patients, clinic staff, and peers. Fellows also receive verbal synthesis of the feedback from the program director every 6 months.

Outline of Specific Clinic Experiences

General Endocrinology Continuity Clinic

Monday's and Thursdays: 8:00 am – Noon (various attendings)

Clinic Description:

The general endocrinology continuity clinics allow the fellow to see new outpatient endocrine/diabetes consults as well as follow inpatient consult patients following their discharge from the UF Health Medical Center. Fellows maintain a clinic schedule separate from the supervising attendings and follow their patients throughout the duration of their fellowship. They will see, on average, 2 new patients and 4-5 follow-up patients each session.

Clinic Specific Goals and Objectives:

1. To provide the opportunity to assume responsibility for the evaluation and management of a wide variety of endocrinologic diseases.
2. To provide the opportunity to serve as an outpatient endocrinologic consultant.
3. To provide the opportunity to see the evolution of endocrinologic disease as patients go from the inpatient to the outpatient setting.
4. To learn the timely and cost-effective outpatient evaluation of endocrinologic disease, appropriately utilizing routine and dynamic laboratory testing, radionuclide and radiologic studies.
5. To provide experience in the evaluation and management of hormone-producing neoplasms, including carcinoid syndromes, ectopic hormone production, islet cell tumors and multiple endocrine neoplasia syndromes.
6. To be exposed to the use of genetics and genetic counseling as it applies to endocrinologic diseases.

Teaching Methods:

All patients are referred directly to the endocrinology fellow and the endocrinology fellow maintains a clinic schedule separate from that of the supervising attending physician. All patients will be initially evaluated by the fellow and subsequently discussed with the supervising attending physician. Physical findings and pertinent study results will be reviewed and a plan of diagnosis and treatment developed. As the fellow gains experience, she or he will be given more responsibility in developing evaluation and treatment plans. All care plans, however, will be discussed with the supervising attending physician prior to implementation. The fellow will assume responsibility for documenting their evaluation and treatment plans and communicating these to the referring providers.

Disease Mix

The full spectrum of endocrinologic disease is referred to the UF Health Endocrine clinics and includes thyroid, diabetes mellitus, adrenal, reproductive, pituitary, parathyroid, and bone disease.

Patient Characteristics

The general endocrinology consult clinic patients are socioeconomically and culturally diverse, arising from UF Health Medical Center's usual referral base. Patients are of both genders and their ages range from adolescent to geriatric.

Procedures

1. Fine needle aspiration (FNA) biopsy of the thyroid – for assessment of thyroid nodules
2. Diagnostic ultrasound and ultrasound guidance for thyroid FNA biopsy.
3. Sensory testing of feet with nylon monofilament

Pathologic Material

1. Thyroid cytology, surgical pathology
2. Adrenal surgical pathology
3. Pituitary surgical pathology

Reading Materials

Becker: Principles of Endocrinology

DeGroot: Textbook of Endocrinology

American Association of Clinical Endocrinologists Clinical Guidelines:

<http://www.aace.com>

Neal: Case studies in endocrinology, diabetes and metabolism: a problem-oriented approach, 1995.

Stone Clinic

Tuesdays 7:30 am – 12 noon

Faculty: Steven Mandia, M.D. – rotation coordinator director

Clinic Description: The Stone Clinic sees approximately 10 patients per session. Of these, 2-4 of these patients are new patients. A variety of metabolic stone diseases are evaluated. The patient population is culturally and ethnically diverse. While predominantly older female patients, the population may include children, adolescents and males.

Clinic Specific Goals and Objectives:

1. Provide the opportunity to become proficient in the diagnostic evaluation / management of stone diseases
2. Provide the opportunity to become proficient in the interpretation of imaging assessments.
3. Provide the opportunity to become proficient in the evaluation / management of complications of stone diseases including acute kidney injury, infection and pain.

Teaching Methods:

All patients (both new and follow-up) are seen initially by the fellows and are presented to the attending physician. Physical findings are confirmed, bone density, laboratory, radiologic and pathologic studies are reviewed, and diagnosis and treatment plans are developed. As the fellow gains further experience, she or he receives more responsibility in managing these patients, although the attending physician remains available to discuss all aspects of patient care.. The fellow will assume responsibility for documenting their evaluation and treatment plan as well as communicating these plans to the referring providers.

Disease Mix:

There is a wide variety of metabolic stone disease that is referred to the Clinic.

Patient Characteristics

The Stone Clinic patients are socioeconomically and culturally diverse, arising from UF Health Medical Center's usual referral base. Although postmenopausal and geriatric Caucasian females are most commonly those presenting with stone disease, African Americans, Haitians, Latinos, Southeast Asians, men, children and adolescents are also seen.

Procedures

None

Pathologic Materials

On occasion, surgical pathology specimens including bone and parathyroid tissue will be reviewed with the Pathology Department.

Reading Materials/Other Resources

Favus: Primer on the Metabolic Bone Diseases and Disorders of Mineral Metabolism, 4th ed.

Bonnick, SL: Bone Densitometry in Clinical Practice, Humana Press, 1998.

Holick, MF, Krane SM, Potts JT: "Calcium, Phosphorus, and Bone Metabolism: Calcium-regulating Hormones," in Harrison's Principles of Internal Medicine.

Nemours Children's Endocrine Clinic\Wolfson's Children's Hospital.

Faculty:

Robert Olney, MD Rotation Coordinator

Jose Atilio Canas, MD

Larry Fox, MD

Priscila Gagliardi, MD

Nelly Mauras, MD, Division Chief

Lournaris Torres-Santiago, MD

Rotation Description:

The Endocrine Clinic and Hospital rotation allow the fellow to gain greater experience in the evaluation and management of pediatric disorders, learning from well-known experts in pediatric endocrinology. Between 4-8 patients are scheduled each session.

Second year fellows will be expected to have mastered adult disease management, but begin in the understanding of pediatric presentation and management. This will permit the second year fellows to focus on pediatric intense experience with sessions devoted nearly exclusively to life stages and presentations. An important part of the teaching is case conference on Tuesday afternoons which fellows are expected to attend.

Clinic Specific Goals and Objectives:

1. To supplement the exposure to adult disease obtained from general endocrinology clinic

2. To understand the pediatrician's approach to simple and difficult cases.
3. To obtain experience performing and interpreting pediatric studies and normal ranges

Teaching Methods

All patients referred to the Nemours Childrens Clinic are specifically referred to the supervising attending physician. The fellow will initially evaluate a patient and discuss this evaluation with the supervising attending. Physical findings and pertinent study results will be reviewed by the supervising attending and a plan of evaluation and management will be developed. As the fellow gains experience, both in the care of these patients, the trainee will have increasing responsibility and autonomy in plan development. The attending physician will be available for discussion of plans and for supervision.

Disease Mix

The patients presenting to the Nemours Children's Clinic are of a broad spectrum (in terms of acuity and type) of endocrine disease and include type one diabetes, growth disorders, delay in maturation, thyroid cancer, non-toxic diffuse and nodular goiter, autoimmune thyroid disease, overt and subclinical thyroid dysfunction, and thyroid hormone resistance.

Patient Characteristics

The Nemours Childrens Clinic patients are socioeconomically and culturally diverse, arising from a broad referral base because of the Nemours's national and international renown. Patients are of both genders and their ages range from newborn to adolescent.

Procedures

1. Dynamic endocrine testing including evaluation for growth hormone and pituitary deficiency

Reading Materials

1. Pediatric Endocrine Society https://www.pedsendo.org/education_training/
2. Journal of Pediatric Endocrinology and Metabolism

Reproductive Endocrinology Clinic

Faculty:

Samuel Brown, M.D. – rotation coordinator

Staff:

Samuel Brown, M.D.

Center Description:

The Reproductive Endocrinology Clinic is a multidisciplinary clinic that receives referrals for infertile couples of varying etiologies. The clinic sees approximately 10-12 patients each session at two sites.

Clinic Specific Goals and Objectives:

1. To become proficient in the evaluation and medical therapy of infertile patients.
2. To learn about the pathophysiology of obesity and polycystic ovary syndrome
3. To become experienced in the prescription of dietary and exercise therapy

Teaching Methods

The fellows will initially evaluate the patient and discuss the case with the reproductive endocrinologist. The physical and study findings will be reviewed and a plan of evaluation and management will be developed. As the fellow gains experience, she or he will have increasing autonomy and responsibility in the development of evaluation and management plans. All plans will be reviewed with faculty prior to implementation.

Disease Mix:

The spectrum of disease seen in the Reproductive Endocrinology Clinic includes obesity, PCOS hypogonadism, amenorrhea, Turners syndrome. These diseases are of varying acuities and severities, ranging from newly diagnosed patients with few complications to long-standing patients with multiple complications.

Patient Characteristics

The Reproductive Endocrinology clinic patients are socioeconomically and culturally diverse, arising from Jacksonville southeast Georgia and northeast Florida referral base. Patients are of both genders and their ages range from adolescent to middle age.

Pathologic Material - None

Reading Materials:

Yen and Jaffe Reproductive Endocrinology 7th Edition

The Practical Guide to the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults. National Institutes of Health, September 1998.

Educational Conferences

Endocrinology, Diabetes and Metabolism Grand Rounds

Fridays 12:00 pm – 1:00pm

Description: This mandatory monthly meeting, for fellows and faculty, consists of a rotating schedule of a guest lecture and faculty research presentations.

Guest Lecturer: The guest lecture series allows a prominent expert in a basic science or clinical topic in endocrinology, diabetes or nutrition to give a 50-minute presentation of the current status of their field of study. A question-and-answer session and/or clinical case discussion follows the presentation.

Conference Specific Goals and Objectives:

1. To provide an opportunity to learn about topics of endocrinology, diabetes and nutrition from experts in the field, stressing endocrine physiology, pathophysiology, and biochemistry in systemic disease, principles of hormone action, signal transduction pathways and biology of hormone receptors.
2. To provide access to skilled researcher's and clinician's expert opinion.
1. To provide instruction in the critical assessment of medical literature, in clinical epidemiology, in biostatistics, and in clinical decision theory.

Readings

Epidemiology and Clinical Decision Making, Endocrinology and Metabolism Clinics of North America, March 1997.

Sackett: Clinical Epidemiology

Endocrinology Case' Conference Series

Case Conference Series, Clinical Pearls, Core Conference Series, Journal Club, and Board Review,

Fridays 1:00 pm – 2:00 pm

Description: These mandatory meetings for both fellows and attendings are organized by the second year fellows to provide initial or additional didactic instruction in those topics that may require supplementation.

Core Conferences: The core conference series provides opportunities for the fellows to follow a defined didactic curriculum to review the fundamental topics of endocrinology and metabolism. The lectures will be provided by Endocrinology faculty with supplementary lectures by other providers representing adjunct disciplines. The series will include core topics on the essential disease/treatment approaches in addition to additional topics chosen by the fellows. Topics will cover thyroid disease, diabetes, bone disease, androgen issues, reproduction, pediatric endocrinology, pituitary disease, adrenal disease, obesity, and nutrition.

Clinical pearls: As a result of the fellowship annual review this conference was started to allow fellows to present their own cases in an informal manner for discussion of common problems that occur in the workup and management of patients with endocrine disease. The faculty participate to try to come up with various approaches to the problem to allow the fellow to come up with a solution that fits the situation.

Journal club: The journal club series involves the presentation by a fellow or faculty/staff members of recent journal articles from varying basic science or clinical topics in endocrinology, diabetes and nutrition. The presentation of the article includes a discussion of the background leading to the research question, a discussion of the population under study and the methods used, and a discussion of the results and its limitations and implications. Commentary from faculty/staff/fellows is solicited at the end of the presentation. Journal club is also the setting to discuss research modalities and statistics.

Endocrinology Board review: The board review is fellow led and consists of board style questions posed by fellows to each other. The session is attended by faculty who provide expert opinion to augment the fellow led discussion.

Fellow case presentation and literature review: The fellow case presentation series allows the fellow to present interesting cases from the inpatient or outpatient service and review the literature regarding current therapies and research. Following the presentation, there is discussion with the division faculty (as well as invited guest physicians from other specialties) regarding fine points of diagnosis and treatment.

Conference Specific Goals and Objectives:

1. To provide core endocrinology information in a didactic format.
2. To provide initial or additional didactic instruction in those topics deemed needing supplemental instruction.
3. To provide instruction in the critical assessment of medical literature, in clinical epidemiology, in biostatistics, and in clinical decision theory.
4. To provide settings for interactive, case-based discussions of pressing clinical problems.

Research Experience

Faculty

Michael Haas, PhD

Description: The research experience allows the fellow to work with a supervising research mentor who will help her/him to design and implement a new research project that is carried out throughout the duration of the fellowship. This research project may involve basic or clinical research, depending on the interests or career goals of the fellow. In addition to specific research activities, the fellow will also attend research group meetings and national scientific meetings to deliver poster or oral presentations. Research rotation is not just limited to projects solely of basic science or clinical research. Research or scholarly activity includes writing of case reports review articles or performance of quality improvement.

Goals and Objectives:

1. To provide a meaningful, supervised research experience.
2. To learn the design and interpretation of research studies, responsible use of informed consent, and research methodology and interpretation of data.
3. To provide instruction in the critical assessment of new therapies and of the medical literature.
4. To develop the skills necessary to communicate and publish scholarly activity in various forms

Teaching Methods:

Fellows will meet regularly with their research mentor to aid in the designing and implementation of their research project. Research projects and quality improvement projects will also be reviewed at meetings with faculty and other fellows. The design of the clinical or basic study will include application to the UF Health Medical Center's Institutional Review Board to provide experience in the use of statistics in designing research studies, development of informed consent forms, and use of research methodology. The fellow will be involved in data collection, statistical evaluation and interpretation, with the supervision of the research mentor. The fellow will also attend weekly research meetings to give updates of her or his research findings and learn of other research in her or his area of interest. The fellow is also encouraged to submit her or his research findings for publication or for presentation at a national subspecialty meeting.

Readings

Cummings, S.: Designing Clinical Trials
Hennekens CH: Epidemiology in Medicine
Epidemiology and Clinical Decision Making, Endocrinology and Metabolism Clinics of North America, March 1997.

Method of evaluation:

Every 6 months, the fellow will be evaluated along the following parameters:

1. Spirit of inquiry
2. Scientific integrity
3. Collegiality
4. Productivity
5. Responsiveness to criticism
6. Proficiency in research methods
7. Project/study design and analysis
8. Critical interpretation of scientific literature
9. Conceptual and statistical ability
10. Research ethics
11. Responsible use of informed consent
12. Principles of authorship/research papers

Evaluations

At the end of the fellowship program, the Program Directors and fellow meet for a summative evaluation and the Program Director certifies that the fellow is qualified to sit for the ABIM subspecialty exam in Endocrinology, Diabetes, and Metabolism and has demonstrated sufficient professional ability to practice competently and independently:

Evaluation of Faculty:

Faculty members who serve as attendings on the consult service and in the ambulatory clinics are evaluated by fellows regularly. The timing of this fellow assessment of faculty evaluations is based upon the attending consult schedules and the ambulatory rotation dates. Discussion of faculty strengths and weaknesses occurs at meetings with all fellows and Program Director, as well as in the annual evaluation meetings with the Program Director. Fellow comments are the single largest source of material for faculty feedback. Fellows meet with the Program Director for this purpose both individually and as a group. At annual intervals, the Program Director reviews the evaluations and addresses potential remediation as needed for the upcoming year with faculty. On the basis of these evaluations, faculty are invited to continue as teaching faculty in the Program.

Evaluation of the Program:

Performance and outcome tools are utilized to assess the educational effectiveness of the fellowship program. Fellows and faculty complete an annual survey that evaluates the program. Fellows also complete an annual written evaluation of the Fellowship Program that includes review of ambulatory and in-patient clinical rotations and all conferences. Fellows participate in a review of the program as a whole at the Annual Fellowship Program evaluation meeting attended by fellows, designated key clinical faculty, and the Program Director. At this meeting, action items are identified for implementation for program improvement. A summary of this meeting and the identified action items are then presented at the next faculty meeting by the Program Director. The performances of graduates on the ABIM Certification Examination in Endocrinology, Diabetes, and Metabolism and of fellows on the in-service examination are reviewed, and used as one measure of evaluating the effectiveness of the program.

Counseling and Remediation:

If a fellow requires remediation in one or more areas that impact on clinical competence, a plan of remediation is developed and implemented, and its effectiveness is monitored and evaluated. If a faculty member receives poor evaluations as an attending physician, those evaluations and plans for improving performance are discussed in a meeting with the program director.

If a possible substance abuse problem is reported on behalf of a fellow, a confidential process to investigate any allegation regarding substance abuse will be initiated by the Director responsible for Graduate Medical Education under the direction of the Chair of the House Staff Committee

and the Chair of the Internal Residency Review Committee adhering to the Substance Abuse Policy for Housestaff. In addition, all residents and faculty are required to attend presentations on “Physician Impairment” and “Sleep, Alertness, and Fatigue Education in Residency

Assessment Strategy for Fellows

EVALUATION

These numbers are listed in the EVALUATION by core competency and evaluation method.

1. Faculty assessment of Fellow performance in in-patient and ambulatory settings at each by the supervising attending (ACGME competency based)
2. Annual fellow assessment of peers
3. Annual fellow self-assessment
4. Non physician team member (RN, NP, MA, Patient Service Administrator) evaluation in the ambulatory settings
5. In-service examination of medical knowledge (with feedback) for 1st and 2nd year fellows
6. Fellow research evaluations: Twice per year presentation of research with verbal comments by faculty and then subsequent evaluation by Program Director
7. Fellow log record of procedures
8. Fellow portfolio
9. Handoff assessment
10. Clinical evaluation exercise.

Abbreviations: GA global assessment; ITE in service training exam; MSA multisource assessment.

Core competency Committee meets semi-annually to review progress in the prior 6 months.