

Consult Endocrinology Team

The Endocrine service includes the inpatient and outpatient management of patients with various Endocrine disorders, the leading one being Diabetes Mellitus and its complications. The service also provides consultative service to University Hospital and the VA Hospital. The Endocrinology division includes the following individuals:

Ruth S Weinstock, M.D./Ph.D.- Medical Director; Professor of Medicine; Chief, Endocrinology, Diabetes and Metabolism.

Barbara L Feuerstein, M.D.
Clinical Assistant Professor of Joslin Center for Diabetes

Roberto E Izquierdo, M.D.
Associate Professor of Joslin Center for Diabetes

Mukhtar I Khan, M.D.
Assistant Professor of Medicine

Jennifer Kelly, D.O.
Clinical Assistant Professor of Medicine

Arnold M Moses, M.D.
Professor of Medicine

Steven V Zygmunt, M.D.
Clinical Assistant Professor of Joslin Center for Diabetes

Grant G Kelley, M.D.
Associate Professor of Medicine

I. Educational Purpose

The general internist should be competent to evaluate and treat common endocrine disorders including diabetes, thyroid disorders, adrenal and pituitary disease and metabolic bone disease. Intrinsic to good training is the appropriate understanding of when referral to an endocrinologist is indicated. He/She also needs to develop expertise in initial consultations and the management of glucose control and diabetes-related complications of hospitalized patients.

II. Learning Venue

A. Rotation Description:

The consult Endocrinology service is a hospital-based service including University Hospital, Crouse Hospital, and the VA Hospital that will allow residents to see medical and surgical patients ages 18 and older, of male and female gender, and

of varying ethnicities/cultures. The service averages 15-20 patients (80% University, 15% VA, 5% Crouse) and consists of the attending, fellow/s, 1-2 house staff officers, and 1-2 4th year medical students.

Expectations of PGY-1: The intern will complete detailed history and physicals of referred patients and complete progress note on a daily basis. He or she will follow and average of three patients. The intern will be expected to recognize and treat the basic clinical and laboratory pictures of common Endocrinological disorders seen in the hospitalized patients including issues related to glycemic control, diabetic ketoacidosis, Thyroid disorders, adrenal insufficiency and excess, and the emergencies related to all other hormonal abnormalities. Interns will also be expected to teach the medical students on the service as well as further his/her own learning through the use of reading materials outlined below. Interns are expected to aggressively improve their own knowledge by reading and seeking evidence based solutions for clinical problems encountered. Interns may be asked to present formal topics.

Expectations of the Senior Resident: Same as intern expectations, plus the senior resident will follow up to 6 patients. The senior resident should master the basic clinical and laboratory interpretation of major Endocrine diseases as well as fulfill teaching responsibilities to the intern and medical students. The senior resident will continue to expand his or her knowledge of endocrine disease with the aid of the reading materials outlined below. It is expected that residents will model practice based learning and exhibit exemplary communications skills as a consultant.

B. Teaching Methods:

1. Daily Attending Rounds

The entire team (students, house staff, fellow, and attending) will discuss patient issues and formulate daily plans. The house staff will be expected to have seen each of their assigned patients, collected all relevant data, and present in a concise, logical format to the attending. Rounds typically begin in the ICU.

Teaching Rounds

Here the attending will lead the team in various exercises to expand their knowledge of Endocrinology. Various formats, including bedside teaching, didactic sessions, focused presentations, will often be incorporated during work rounds.

Outpatient clinics at VA and Joslin

Residents will be exposed to the outpatient approach of managing endocrine problems. The schedule will be provided.

2. Recommended Reading - a packet of recommended reading will be provided at the beginning of the rotation

-Harrison's Text Book of Internal Medicine

-Textbook of Endocrine Physiology: Griffin and Ojeda

- Basic Medical Endocrinology, H Maurice Goodman

- Joslin's Diabetes Mellitus, C. Ronald Kahn, Robert J. Smith, Gordon C. Weir, George L. King, Alan C. Moses

- Endocrine Secrets, Michael T. Mc Dermott

- The Washington Manual Endocrinology Subspecialty Consult, Katherine E .Henderson, Katherine Handerson

- Manual of Endocrinology and Metabolism, Norman Lavin

- Up-to-date online

- PIER at www.acponline.org for relevant peer reviewed discussions
- www.endotext.com is an excellent free online reference.

3. Unique Learning Opportunities:

Conferences: - residents are strongly encouraged to present during teaching conferences

-Weekly (Thursdays) lectures at noon at the Joslin Diabetes center, which includes the lectures on General Endocrine disorders, Diabetes and metabolism, Thyroid disorders and disorders related to calcium/bone, etc.

-Endocrinology, Diabetes & Metabolism Journal Club alternates with Metabolic Bone Disease Conference every other Friday at 8:15 - 9:15 am.

-Pituitary conference: Last Wednesday of every month from 11:00-12:00 in University Hospital's Neurosurgery Conference Room. (check schedule for availability)

-Medical grand rounds and guest research seminar.

Endocrine Outpatient Clinics:

The outpatient practice of endocrinology provides the opportunity to evaluate and manage patients under the one-on-one supervision of clinical endocrinologist. The clinics include diabetes/metabolism, thyroid, bone/calcium, pituitary-gonad-adrenal, nutrition, lipids, obesity, and women's endocrinology. The residents attend the clinics at the Joslin Diabetic Center and the Endocrine clinics at the VA Medical Center.

C. Mix of Diseases and Patient Characteristics

1. Common Clinical Presentations and Diseases:

- Diabetes mellitus
- Obesity
- Thyroid disorders
- Parathyroid disorders
- Pituitary disorders
- Hypothalamic disorders
- Gonadal disorders
- Impotence
- Infertility
- Genetic diseases
- Metabolic bone disease
- Hyponatremia
- Lipoprotein disorders
- Adrenal disorders

2. Endocrine Emergencies:

- Diabetic ketoacidosis
- Hyponatremia
- Hypernatremia
- Hyperosmolar coma
- Adrenal crisis
- Thyroid storm
- Hypoglycemia.

III. Educational Content

1. *Endocrinology*

Principles of Endocrinology

Disorders of the Anterior Pituitary and Hypothalamus
Disorders of the Neurohypophysis
Disorders of the Thyroid Gland
Disorders of the Adrenal Cortex
Pheochromocytoma
Diabetes Mellitus
Hypoglycemia
Disorders of the Testes and Male Reproductive System
Disorders of the Ovary and Female Reproductive Tract
The Menopause Transition and Postmenopausal Hormone Therapy
Disorders of Sexual Differentiation
Endocrine Tumors of the Gastrointestinal Tract and
Pancreas Disorders Affecting Multiple Endocrine Systems

2. Disorders of Bone and Mineral Metabolism

Bone and Mineral Metabolism in Health and Disease
Diseases of the Parathyroid Gland and Other Hyper- and Hypocalcemic Disorders
Osteoporosis
Paget Disease and Other Dysplasias of Bone

3. Disorders of Intermediary Metabolism

Disorders of Lipoprotein Metabolism
Hemochromatosis
The Porphyrias
Disorders of Purine and Pyrimidine Metabolism
Wilson's Disease
Lysosomal Storage Diseases
Glycogen Storage Diseases
Other Inherited Disorders of Carbohydrate Metabolism
Inherited Disorders of Connective Tissue
Inherited Disorders of Amino Acid Metabolism Presenting in Adults
Inherited Defects of Membrane Transport

IV. Method of Evaluation

Evaluations are based on the six core competencies. Interim evaluations will be provided to each member of the team. All team members are expected to complete formal evaluations at the end of each rotation using the web-based E-Value evaluation software.

V. Rotation Specific Competency Objectives

- A. **Patient care** – generic link to competency document
- B. **Medical knowledge** – generic link to competency document
- C. **Professionalism** - Generic link to competency document
- D. **Interpersonal and Communication skills** – Consult services are by nature rotations that test a residents 'people' skills. When you are asked to consult on a patient, the many members of the 'Team' asking for help have varying attitudes about how much they value your opinion. Your performance on how well you do this is reflected by 1) the clarity of your consult summary of the case 2) the clarity of your consultative advice 3) the communication of that information to the "team" that has asked for your help. Disagreements are inevitable and learning how to respond and react to this is one of the learning values of consultative medicine.
- E. **Practice Based Learning** – generic link to competency document
- F. **Systems Based Practice** – This rotation offers a unique opportunity to work in a cross specialty environment including ICU, surgical and psychiatric hospitalized services.

Reviewed 10/05 by Wafic Wafa, MD, David DiCesar, MD and Steven Zygmunt, MD

Revised 6/29/09 A. Ananth Shankar