

Goals and Objectives Endocrinology, Diabetology and Metabolism Rotation

Introduction:

This two month rotation consists of combination ambulatory endocrinology clinic and inpatient consults. At the discretion of the attending (supervising) endocrinology residents are scheduled to spend equal amount of time rotating between outpatient clinic and inpatient consult service. In the outpatient clinic, they will see both new patient referrals and follow-up patients. All patients are presented to the Attending and a management plan is discussed. They are encouraged to follow patients they have seen in clinic whenever possible. Inpatient consults are presented and reviewed with attending. Inpatient consults are followed daily until discharge or the team signs off. The resident is expected to attend the Endocrinology grand rounds, and is expected to present at these rounds.

For Endocrinology rotations, residents will be assigned to specific teaching sites including Al-Amiri Hospital, Mubarak Al-Kabeer Hospital, Al-Farwaniya Hospital, Al-Jahra Hospital, or Al-Adan Hospital.

Rotation Structure and Schedule:

On the consult service, it is expected that resident sees an average of 2-3 new cases per day, and follow up on minimum of 5 cases/day.

The resident will initially perform all new consults; this will usually require 1 hour per consult, including approximately 20-30 minutes of reading time on a topic pertinent to the consult. The patient is subsequently seen jointly by the resident/student and the attending. Consultations will not be placed on the chart until signed by the attending. Emphasis is placed upon a pertinent history and physical with review of laboratory markers.

In the Endocrinology ambulatory clinic, the resident is expected to work with preceptor on a one to one basis seeing and evaluating patients.

Sample Daily Schedule On Inpatient Consult Service:

7:30 am to 8:00 am: Resident attends morning report. Residents must maintain 70% mandatory attendance.

8:00 am to 9:00 am: Didactic lectures (or at least once weekly).

9:00 am to 12:30 pm: Resident follows up on old patients and work up new consults.

12:30 pm to 2:00 pm: Team gather and round on all new and old patients.

On-call Schedule:

The resident must take general medicine call, as assigned by the internal medicine program director.

Endocrinology Rotation Curriculum

Teaching Rounds:

Each new consult/patient encounter seen by the resident will form the basis for teaching rounds. The new consult is presented by the resident to the entire Endocrinology/Diabetology consult team. The team will then see the patient as a group and review relevant history and/or obtain additional history from the patient and patient record. Pertinent physical findings (positive and negative) will be reviewed at the bedside. This component will be followed by formulation of a differential diagnosis and the development of diagnostic and therapeutic plans. Additional discussion may include pathophysiology, epidemiology, natural history and complications of the disease process in question. In the event that there are no new consults on a given day, the resident/student is assigned to see patients for follow-up visits with ensuing presentation, review and discussion at the bedside.

Additional Instruction:

The resident are expected to present "interesting cases" from the consult service at the morning medicine conference in great detail, and will be asked to review the literature and discuss certain aspects of the case.

Supervision:

All cases are supervised by the attending physician board certified Endocrinologist/Diabetologist.

Educational Resources to be used and Reading Lists:

A reading list compiled from current journal articles will be provided at the beginning of each rotation. Residents are referred to standard textbook of Internal Medicine (i.e. Harrison's Principles of Internal Medicine) along with board review material for quick references (MKSAP Endocrinology or Med study Endocrinology) and are expected to independently research topics related to patients that they have encountered during the rotation. Residents are encouraged to submit valuable articles they encounter for inclusion in the reading list. Residents are highly encouraged to write up cases encountered on rotation. Publication of cases encountered on rotation is highly encouraged for those interested in pursuing fellowships in Endocrinology.

Objectives and Core Competency:

Residents are evaluated monthly based on CAN med core competency: (1) Medical expert; (2) Communicator; (3) Collaborator; (4) Leader; (5) Health advocate; (6) Scholar; and (7) Professional.

1. Medical Expert:

■ R1-R2 residents:

By the end of the rotation, the resident will be able to:

1. Obtain a complete and concise history in patients presenting with:
 - a. Endocrine tumors and cancers.
 - b. Diabetes mellitus type 1 and 2
 - c. Thyroid disease
 - d. Disorders of lipid metabolism
 - e. Osteoporosis
 - f. Endocrine disorders in pregnancy
 - g. Obesity

- h. Calcium disorders
 - i. Adrenal disorders
 - j. Anterior and posterior pituitary disorders
 - k. Hypoglycemic disorders
 - l. Androgen disorders in males and females
2. Demonstrate proficiency in complete and appropriate assessment of patients that will include:
- a. clinical examination of the thyroid
 - b. clinical examination to detect diabetic complications
 - c. visual field testing by confrontation and extraocular muscle function
 - d. Interpret the results of hormonal assays in basal, stimulated and suppressed states.
 - e. Understand the use of radioisotopes in diagnosis and management of endocrine disorders
 - f. Interpret diagnostic imaging in the diagnosis of endocrine disorders
 - g. Interpreting and providing advice on glucose monitoring results.
 - h. Interpreting bone density reports.

■ **R3-R4 residents:**

By the end of the rotation, the resident will be able to:

1. Meet competency stated for R1-R2 residents.
2. The resident will demonstrate the ability to describe the etiology, epidemiology, pathophysiology, clinical features, relevant laboratory knowledge, and the therapeutic options for major Endocrinological disease entities. This will include Demonstrate in-depth understanding of laboratory tests, and diagnostic imaging techniques in diagnosis and assessment of Endocrinological diseases, including: Alterations in the endocrine system in persons with systemic disease and/or critical illness; Disorders of glucose metabolism including hypoglycemia and hyperglycemia; Disorders of lipid metabolism; Type 1 and Type 2 diabetes mellitus including the role of nutrition, exercise, pharmacological management including but not limited to insulin pump therapy and complications; Metabolic bone disease and disorders of calcium metabolism including but not limited to disorders of the parathyroid glands and the Vitamin D system; Disorders of the thyroid gland; Disorders of reproduction in females, including disordered sexual development and gender identity, abnormalities of puberty, menstrual disorders, hypogonadism, infertility and hyperandrogenic states; Disorders of protein metabolism; Disorders of the adrenal cortex and the adrenal medulla; Disorders of the pituitary gland (anterior and posterior); Hypertension related to endocrine disorders; Screening for endocrine disorders and autoimmunity as it relates to the endocrine system; Nutrition as it applies to endocrine disorders; Endocrine tumors and cancers.

■ **R5 resident:**

By the end of the rotation, the resident will be able to develop proficiency and competency in the following areas:

1. Ability to undertake a critical appraisal of the literature
2. Synthesize data to derive the most likely diagnosis (es) and differential diagnosis (es).
3. Independently choose appropriate management and therapeutic plan.
4. Demonstrate effective consultation skills in the provision of timely well-documented assessments and recommendations in written and/or verbal forms.
5. Demonstrate the attitudes and skills necessary to collaborate with other health care professionals necessary to the care of the patient.
6. Access, retrieve, critically evaluate, and apply information from all sources in maintaining the highest standard of patient evaluation, care, and management.
7. Demonstrate medical expertise in situations other than those involving direct patient care (e.g. medical presentations, patient and referring physician education, and medico-legal opinions).
8. Demonstrate insight into his/her own limitations of expertise by self-assessment.

Communicator:

By the end of this rotation, the resident at all levels will be able to perform the following:

1. Establish a therapeutic relationship with patients and their families, emphasizing active listening, understanding, trust, empathy, and confidentiality.
2. Demonstrate ability to provide appropriate support and counsel to a patient and family with endocrinological disorders.
3. Deliver information to a patient and family, colleagues and other professionals in an empathetic manner and in such a way that it is understandable, encourages discussion and participation in decision-making.
4. Counsels patients and/or families in an empathetic, accurate and supportive manner with attention to age, disability, gender, ethnicity, religion, level of education and cultural beliefs.
5. Discuss appropriate information with the patient, his/her family, and other healthcare providers (hospitalists, other physician requesting consultation, nursing staff, and other health professionals) to facilitate the optimal management plan for the care of the patient.
6. Articulate in writing a sound and detailed information about the patient's history, pathogenesis of their illness, and appropriate evidence-based treatment plan.
7. Present verbal reports of clinical encounters and plans effectively and in a succinct manner to Attending Staff and to other physicians requesting consultation.

3. **Collaborator:**

By the end of this rotation, the resident at all levels will be able to perform the following:

1. Demonstrate awareness of the importance of the multi-disciplinary approach required in the management of endocrine disorders, and contribute effectively to inter-disciplinary team activities.
2. Work effectively with nurses, patient educators, laboratory physicians, pharmacists, primary care providers and surgeons to optimize patient outcomes.

3. Recognize the importance of non-adherence in the management of endocrine disorders and demonstrate strategies collaborate with the patient and his/her family to optimize compliance with treatment regimen.
4. Respect differences and address misunderstandings and limitations in other professionals and employ collaborative negotiation to resolve conflicts.

4. Leader:

By the end of this rotation, the resident at all levels will be able to perform the following:

1. Residents will demonstrate timeliness in completing assignments & performing consultations (which should typically be completed and reviewed on the day received), and progress notes.
2. Residents will demonstrate the ability to prioritize and perform necessary follow-up
3. Residents will demonstrate the use of cost/benefit ratios of diagnostic and interventions for Endocrinological disorders as well as cost containment, efficacy, and efficiency as they relate to decision making and quality assurance.

5. Health Advocate:

By the end of this rotation, the resident at all levels will be able to perform the following:

1. Residents will identify the important determinants of health affecting patients, particularly those contributing to the burden of illness and disability from long-standing Endocrinological disorders.
2. Advocate on behalf of patients and parents for improved and timely access to specialist, and allied health care, necessary surgery, beneficial medications and therapies, and community based support services.
3. Demonstrate appropriate attention to prevention counseling in patient encounters.
4. Recognize and respond to opportunities to prevent and treat selected endocrine disorders through patient education and counseling.

6. Scholar:

By the end of this rotation, the resident at all levels will be able to perform the following:

1. Demonstrate evidence of teaching/educating consulting services and team members
2. Search and critically appraise current Endocrinological literature, and apply new knowledge based on appropriate evidence
3. Demonstrate effective oral presentation of case reports, journal club, or rounds with sound synthesis of pertinent information
4. Facilitate education of patients, housestaff, students and other professionals in formal and informal educational settings regarding various Endocrinological disorders, and the burden of long-term sequelae of diabetes.
5. Teach other housestaff in the outpatient and inpatient consultation settings

7. Professional:

By the end of this rotation, the resident at all levels will be able to perform the following:

1. Demonstrate effective, ethical medical care with integrity, honesty, and compassion.
2. Display appropriate professional behaviors and inter-personal skills, including deportment, punctuality, and respect.
3. Demonstrate a willingness to accept peer and supervisor reviews of professional competence.
4. Demonstrate recognition of personal limitations of professional competence and demonstrate a willingness to call upon others with special expertise.
5. Strive for a balance between personal and professional roles and responsibilities.

Evaluations:

Evaluations should be done on an ongoing basis and residents should ensure they receive and provide verbal mid-rotation feedback to discuss strengths & weaknesses and ensure objectives are being met. At the end of the rotation, a written evaluation will be completed by the attending, with whom the resident spent the majority of their rotation. It is also expected that the residents will complete evaluations on all attendings with whom they have worked.