Department of Medicine  
Internal Medicine Residency Program Rotation Curriculum

I. Rotation Sites and Supervision

Rotation Name: ENDOCRINOLOGY

<table>
<thead>
<tr>
<th>Site</th>
<th>Faculty Supervisor</th>
<th>Administrator</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>UCIMC</td>
<td>Ping Wang, M.D.</td>
<td>Debra Carreon</td>
<td>949-824-6887</td>
</tr>
<tr>
<td>LBVAMC</td>
<td>Ellis Levin, M.D.</td>
<td>Noah Wagner</td>
<td>562-826-5748</td>
</tr>
</tbody>
</table>

II. The educational rationale and goals for this rotation

Learn the diagnosis and treatment of common endocrine disorders including diabetes mellitus, thyroid disorders, osteoporosis, hyperlipidemia, pituitary and adrenal disorders, hypogonadism, hypertension, polycystic ovarian disease, diabetes insipidus, gynecomestia, hypoglycemia.

III. Competency-based Objectives for the Endocrinology Consult & Clinic Rotation

Educational Objectives: PGY1 Residents

1. Will be familiar with the history relevant to basic endocrinologic diseases: diabetes mellitus, thyroid disorders, osteoporosis, hyperlipidemia, pituitary and adrenal disorders, hypogonadism, hypertension, polycystic ovarian disease, diabetes insipidus, gynecomestia, hypoglycemia.
2. Will be familiar with the physical diagnosis relevant to these same conditions.
4. Will be capable with the diagnosis and management of osteoporosis.
5. Will be familiar with the basic management of newly diagnosed type 1 and type 2 diabetes.

The Senior Resident

1. Will be familiar with the history relevant to basic endocrinologic diseases: diabetes mellitus, thyroid disorders, osteoporosis, hyperlipidemia, pituitary and adrenal disorders, hypogonadism, hypertension, polycystic ovarian disease, diabetes insipidus, gynecomastia, hypoglycemia.
2. Will be familiar with the physical diagnosis relevant to these same conditions.
3. Will be capable to manage endocrinologic emergencies: Pituitary apoplexy, DKA, hyperglycemic emergencies, thyroid storm, thyroid coma, diabetes insipidus, acute Addisonian crisis.
4. Will be capable with the diagnosis and management of osteoporosis.
5. Will be capable to provide basic management of newly diagnosed diabetes.
6. Will be capable to manage thyroid disease.
7. The management of hypothyroïdism
8. The physical diagnosis of the thyroid gland
Competency-based Objectives for the Endocrine Consultation Service Rotation

**Patient Care**
1. Acquires accurate and relevant histories from patients (PC 1)
2. Performs accurate and appropriate physical exams (PC 1)
3. Synthesizes data to define a patient’s central clinical problem(s) (PC 1)
4. Consistently develops an appropriate care plan (PC 2)
5. Efficiently organizes for the care of patients (PC3)
6. Recognizes situations requiring urgent or emergent care (PC 2)
7. Seeks additional guidance or consultation when appropriate (PC 2)
8. Provides consultation services for patients with basic and complex clinical problems (PC5)

**Medical Knowledge**
1. Possesses the scientific knowledge required to provide care for common medical conditions (MK1)
2. Able to interpret basic diagnostic tests accurately (MK 2)
3. Understands the rational and risks associated with common procedures (MK 2)

**Systems Based Practice**
1. Works effectively within the team (SBP1)
2. Advocates for safe patient care (SBP2)
3. Reflects upon and learns from own incidents that may lead to medical error (SBP2)
4. Minimizes unnecessary diagnostic and therapeutic tests (SBP 3)
5. Provides complete and appropriate verbal and written care plans to the primary team (SBP 4)
6. Communicates effectively with other caregivers during transitions in patient care (SBP 4)

**Practice Based Learning**
1. Consistently self-reflects upon one’s practice and performance (PBL-1)
2. Solicits feedback and is open to unsolicited feedback (PBL 3)
3. Able to utilize information technology effectively (PBL 4)
4. Able to critically appraise clinical research studies and reports (PBL 4)

**Professionalism**
1. Is respectful of and responsive to needs and concerns of patients, caregivers and members of the team (PROF 1)
2. Completes tasks in a timely manner (PROF 2)
3. Is sensitive to each patient’s unique characteristics and needs (PROF 3)
4. Demonstrates accountability for the care of patients (PROF 4)
5. Is honest and forthright in clinical interactions and documentation (PROF 4)

**Interpersonal & Communication Skills**
1. Engages patients in shared decision making (ICS 1)
2. Able to develop therapeutic relationships with patients and caregivers (ICS 1)
3. Engages in collaborative communication with appropriate members of the team (ICS 2)
4. Health records are organized and accurate (ICS 3)

**IV. The principal teaching methods for this rotation**
Inpatient and outpatient consultations and weekly and monthly conferences

**V. Responsibilities for medical students, PGY1 residents (interns), PGY2 & PGY3 residents and attendings on this rotation**

- Medical Student: Participate in patient evaluations and assist with consultations.
- Medical Resident: Each resident will see inpatient consultations as assigned by the service

**Medical Residents: PGY 1 Residents**

**Patient Care Responsibilities:**
Residents are responsible for following of a select number of patients on the consult service and in clinic. Patient selection is directed by the fellow or attending. All patient care activities of the consult resident are under direct supervision of the fellow.

**Procedures:**
The resident can perform procedures appropriate for their level of training on the consult service. All procedures will be performed under the direct supervision of the resident or fellow.

**Education:**
The residents are expected to contribute on rounds. They are expected to present their patients on rounds, and contribute to the discussion of diagnosis, management, pathophysiology, and any related basic science issues. They will present patients at conference. They are expected to review pertinent medical literature. Guidance from the fellows and senior residents will be provided.

**Patient Care:**
The PGY1 residents will perform full consultation H&P on all new consults under their care. They will be responsible for collecting all database information, reviewing prior records, following laboratory information, and writing recommendations under direct supervision of the fellow.

**Senior Residents (PGY2 & 3)**
Senior residents will be responsible for all activities noted for PGY1 residents. In addition, these residents will be responsible for coordinating teaching efforts for interns and medical students. The senior residents will place emphasis on Medical Knowledge Management in the context of consultation. The senior residents will participate in divisional conferences and present appropriate cases with literature review and critical appraisal. The senior residents will be available to teach medical students physical diagnosis.
The senior resident will be certified in basic procedures including thoracentesis, paracentesis, arterial blood gas procedures, and lumbar puncture, and will be responsible for teaching this procedure to the PGY1 residents.

- Fellow. The fellow, resident and consult attending will meet daily to discuss new and follow-up patients. All consults need to be signed by the attending staff. Weekly diabetes inpatient reaching rounds with the fellow and house staff occur on Wednesday at 8:30 am.
- The resident will attend the following four clinics weekly. The practice of endocrinology is largely in the outpatient area.

**UCIMC**
- Diabetes Clinic: 8:30 am – 12 noon, Tuesday.
- Endocrine Clinic: 1 pm – 5 pm, Wednesday.

**VA**
- Diabetes Clinic: 8:45 am – 12 noon, Thursday.
- Endocrine Clinic: 8:45 am – 12 noon, Friday.

A weekly grand rounds/journal club occurs on Thursday afternoon at 1 pm at the VA. Monthly clinical conferences in which the fellows present interesting management cases to the faculty occur on the UCI Campus, usually on the third Tuesday of each month at 4 pm. Guest speakers present at the Endocrine Grand Rounds every other month at UCIMC. The schedule should be obtained from the fellow and section secretary at UCIMC (Gail, 949-824-6887) or section secretary at the VA (Noah, x5748 at the VA). There is ample opportunity for reading during the endocrine section rotation. The residents should review at least the previous year’s worth of clinical reviews in the Journal of Clinical Endocrinology and Metabolism (available in our library). Additional reading in endocrine texts and articles (provided by the fellows and staff) are required. A suggested reading syllabus of 30 key articles in the field will also be provided to the resident on the first day of the rotation.

**Fellow:**
The clinical endocrine fellow has a variety of responsibilities that focus on Supervising resident and students on the teaching service, arranging for the various conferences and attending clinics. He or she is the direct link between the inpatient wards and the consultation service. Listed below is an outline of the major duties of the clinical fellow and what exactly the fellow role entails.

1. The fellow should see all of the consult cases, including those primarily staffed by the resident on the endocrine rotation. At UCIMC, the consult fellow will round daily on the patient followed by the consult service. Rounds with the attending physician are usually on Monday, Wednesday, and Friday, but may occur more frequently as the need arises. At LBVAMC, the fellow will meet with one general medicine ward (two housestaff teams) every week, Monday at 8:30 am, to go over the detailed management of one or two diabetes patients under the care of the housestaff. Therefore, all ward teams will have met with the fellow over a month’s time.
2. Cases should be assigned by the fellow to the housestaff on the consult service to evaluate and follow. The fellow will assist the resident in making sure the proper tests are ordered, carried out and evaluated, and that the discharge planning links the in-house and outpatient management.
3. The fellow should discuss each consult with the general medicine housestaff, provide them with articles and be sure that they do adequate follow-up. This will be overseen by the faculty attending.
4. The fellow should discuss each case with the attending on service for the month at formal attending rounds. Follow-up discussions are dictated by the ongoing nature of the care provided.
5. The fellow on the consult service should find cases to present at the clinical conferences. If no cases are in the hospital, out patient cases can be used. The fellow should also prepare and assign to the resident, responsibility for journal club articles, when at the VA.
6. Monthly case management conferences are held on the Monday of each month on the UCI Campus in the Gillespie Neuroscience Building. The fellows will present 2 endocrine cases to the faculty, and discuss their diagnosis and management.

Clinics:
1. Every Tuesday morning, the fellows need to be in the Diabetes Clinic at UCIMC. These clinics are primarily the responsibility of the fellows.
2. The fellow on elective covers the clinics mentioned and rotates through the Gyn-Endocrine Clinic and Pediatric Endocrine Clinics at the medical center. He/she also engages in a research project during this time.
3. The medical center fellow attends the Endocrine Clinic at UCIMC on Wednesday afternoons, as well as the Diabetes Clinic.
4. The VA-based fellow attends the Thursday morning Diabetes and Friday morning Endocrine Clinics, while the "elective" fellow should also attend Endocrine Clinic at the VA.
5. The fellow assigned to UCIMC is required to attend Dr. Wang's clinic at the Medical Plaza on Monday afternoon unless there is an emergent consult at the hospital
6. Attendance at the Lipid Clinic at the VA is optional, but suggested.
7. The senior fellow has responsibility for making out the year-long rotations and weekend schedules with concurrence by the junior fellows and Dr. Levin and Dr. Wang. The on-call schedule must be prepared monthly and provided to the hospital operators two days prior to the beginning of each month.

Research:
A research project with any of the faculty must be selected and initiated in the first year, with the selected faculty member as the mentor. The plan for the proposed research should be submitted to the Division Chief and the Fellowship Program Director. Research activity is mandatory for the first and second years, and is monitored by publication of scholarly work which includes basic or clinical research, as well as case reports.

Beepers:
1. All of the fellows share endocrine call. The on-call beeper needs to be carried 24 hours per day, 7 days per week, by a fellow. Most questions can be answered over the phone, although occasionally, the fellow needs to come in to see a DKA or to round on ill inpatients on the weekends.
2. The attending-of-the-month on the endocrine consult service should be available for back-up. However, if they are not available, feel free to call any attending you can find. Everyone is very willing to help.

Ellis Levin, M.D. 562/826-5748, pager 7388
Bogi Andersen, M.D. 949-824-9093, pager 714-506-9007
VI. Core primary resource readings
Basic Recommended Readings for this rotation come from Current Medical Diagnosis and Treatment, 2009. Access these readings at

http://www.accessmedicine.com/resourceTOC.aspx?resourceID=1

In addition, you should be familiar with basic practice guidelines in this discipline. Access these at


Select the appropriate chapters for review. These chapters can be accessed through the Grunigen Medical Library website.

http://www.accessmedicine.com/resourceTOC.aspx?resourceID=1

Chapters of specific relevance for this rotation are

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>26</td>
<td>Endocrine Disorders</td>
</tr>
<tr>
<td>27</td>
<td>Diabetes Mellitus &amp; Hypoglycemia</td>
</tr>
<tr>
<td>28</td>
<td>Lipid Disorders</td>
</tr>
</tbody>
</table>

Endocrinology Section Reading List:

ADH


Adrenal

Stewart PM. Is subclinical Cushing’s syndrome an entity or a statistical fallout from diagnostic testing? Consensus surrounding the diagnosis is required before optimal treatment can be defined. J Clin Endocrinol Metab 95:2618-20, 2010.


Aging

Anorexia Nervosa


Autoimmune Polyendocrine Syndrome


Calcium Metabolism


**Cushing’s Disease**


**Diabetes**


Purnell JQ, Flum DR. Bariatric surgery and diabetes: who should be offered the option of remission? JAMA. 2009 Apr 15;301(15):1593-5.


**Endocrine Hypertension**


**Fertility**


Genomic Medicine

Growth Hormone


Gynecomastia

Hair Conditions


Hyperlipidemia

Hypoglycemia


Hypokalemia

Hypothalamus/Pituitary


**Medical Practice**

**Menopause**


**Metabolism**

**Nephrolithiasis**

**Obesity**


**Osteoporosis**


Ovaries


Paget Disease

Pheochromocytoma


Pituitary


Puberty

Sexual Differentiation


Testosterone

Thyroid


Thyrodo Cancer


Transsexual


VII. Key physical diagnosis skills
Routine HSP, thyroid examination, breast examination in men and women, gonadal examination in men

VIII. Key procedures that the resident should be able to perform
None for the residents. Thyroid FNA for fellows

IX. Key procedures that the resident should be able to understand the indications for and to interpret
Thyroid pituitary, adrenal, and glucose homeostasis tests

X. Key topics
Diabetes Mellitus
Hyperthyroidism
Hypothyroidism
Pituitary Tumors
Osteoporosis
Hyperlipidemia

XI. Evaluation Methods
Faculty will evaluate each resident’s performance using the standard "Internal Medicine Resident Evaluation Form" at the end of each block rotation. Evaluation forms will be submitted to the Residency Program for review by the Program Director and by the Residency Oversight Committee.
Residents will complete evaluations of their attending faculty, their supervising residents, and the rotation itself. These evaluations will be submitted to the Residency Program for Review by the
Program Directors and the Curriculum Committee. Copies of evaluations will be submitted to the Division Chiefs for their review.

a. Professional competencies will be evaluated by (check all that apply)

<table>
<thead>
<tr>
<th>Evaluation Method</th>
<th>Direct Observation &amp; Feedback</th>
<th>Journal Club</th>
<th>Written Exam</th>
<th>Report or Presentation</th>
<th>Other (specify)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Competency</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patient Care</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medical Knowledge</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Practice-based Learning</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communication Skills</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professionalism</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Systems-based Practice</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

b. Evaluation Methods
Faculty will evaluate each resident’s performance using the Competencies Evaluation Form and any special documents developed for the rotation. Faculty will provide formative, face-to-face feedback at the midpoint and end of each rotation.

Evaluation forms will be submitted to the Program Director for review by the Residency Oversight Committee (ROC; competency committee).

Residents will evaluate the rotation, their faculty attending and their peers on the rotation. Rotation Evaluations will be reviewed by the ROC and transmitted to the Division Chiefs.

Updated 6/15/14