**ENDOCRINOLOGY CURRICULUM**

**Northwestern McGaw Family Medicine at Lake Forest**

**Goal:**

1. To develop the diagnostic and management skills necessary to effectively manage the common endocrine conditions encountered by Family Physicians

2. To be able to recognize and refer the more uncommon endocrine conditions encountered by Family Physicians

**Faculty Contacts**

Endocrinology Course Director: Anthony Pick, MD

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**Resident Expectations**

1. Seeing patients under the supervision of Dr. Pick

**Supervision Structure**

Resident will report directly to the assigned supervising endocrinologist.

**Readings:**

*Required:*

1. Standards of Medical Care in Diabetes 2016. Diabetes Care January 1st 2016, Vol. 39 Supplement 1
2. A Review of Endocrinology: Diagnosis & Treatment Unpublished, review prepared by NIH. (Copy of reading in Family Medicine Residency Center); Hypoglycemia pp. 83-93, Hirsuitism pp. 733-749, Hyperlipidemia pp. 162-194, Thyroid Labs pp. 217-228, Thyroid Nodule/CA pp. 296-305, MNGoiter/Thyroiditis pp. 257-269, Hyperthyroidism pp. 270-295, Hypothyroidism pp. 242-256
3. Textbook of family medicine Ed. Robert E. and David P. Rakel, 2016 (Galter Health Sciences Library (GHSL) online). Chapters 34-27. Diabetes Mellitus, Endocrinology, Obesity, Nutrition and Family Medicine

*Optional:*

1. Endocrinology (De Groot): adult and pediatric/Ed. J. Larry Jameson, Leslie J. De Groot et al. 7th Edition 2016 (available Galter Health Sciences Library (GHSL)online)
2. Williams et.al. Textbook of Endocrinology. WB Saunders, 13th Ed. 2016. (GHSL online)
3. A Case-Based Guide to Clinical Endocrinology. Ed. Terry F. Davies. 2nd Edition 2015. (GHSL online)
4. Endocrinology Subspecialty Consult 3rd Edition (Washington manual Series) 2013
5. Lifestyle Medicine A Manual for Clinical Practice. Ed. Jeffrey I Mechanick, Robert Kushner, 2016
6. A Review of Endocrinology: Diagnosis & Treatment Unpublished, review prepared by NIH. (Copy of reading in Family Medicine Residency Center), Sodium/Water Disorders pp. 455-475, Nephrolithiasis pp. 383-390
7. Dyslipidemias: pathophysiology, Evaluation and Management. Ed. A Garg,, Humana Press 2015 (GHSL)

**Objectives:**

***Patient care***

***Residents must be able to provide family-centered patient care that is developmentally and age appropriate, compassionate, and cost effective for the treatment of health problems and the promotion of health.***

1. Communicate effectively, with caring and respect, when discussing endocrine concerns and procedures with patients and families

2. Make informed decisions about diagnostic and therapeutic interventions based on current scientific evidence and clinical judgment

3. Become familiar with the risks/benefits of common endocrine treatments, including the use of systemic steroids and other hormone replacement regimens

***Medical Knowledge***

***Residents must demonstrate knowledge about established and evolving biomedical, clinical, epidemiological, and social-behavioral sciences and the application of this knowledge to patient care.***

1. Familiarity with the anatomy and physiology of the various organs of the endocrine system, including the pituitary, thyroid, parathyroid, and adrenal glands, as well as the pancreas and gonads

2. The appropriate focused history for endocrine symptoms, screening, and a thorough endocrine exam

3. Improve the recognition, differential diagnosis, and management of common endocrine conditions encountered in both outpatient and inpatient settings, including:

1. Diabetes, type 1 and 2, associated complications, prediabetes/diabetes prevention
2. Hypoglycemia (functional, pathological and diabetes treatment associated)
3. Obesity, nutrition and lifestyle medicine (team approach with psychologists, dietitians’/diabetes educators)
4. Cardiovascular Endocrinology and CV risk reduction: hypertension including endocrine hypertension (hyperaldosteronism, Cushing’s syndrome and pheocoromocytoma), dyslipidemias, metabolic syndrome
5. Thyroid disorders: hypothyroidism, hyperthyroidism, thyroiditis, thyroid nodules, goiter and thyroid carcinoma
6. Reproductive Endocrinology: male hypogonadism, erectile dysfunction, male gynecomastia, anabolic steroid abuse; PCOS, primary ovarian insufficiency, PMS/PMDD, menopause, transgender replacement therapy, endocrine disorders of pregnany-gestational diabetes, obesity, hyperthyroidism, hypothyroidism)
7. Bone and calcium disorders: Osteoporosis, vitamin D, parathyroid disease, hypocalcemia, hypercalcemia
8. Adrenal disorders: Cushing’s syndrome, Addison’s disease, primary and secondary hyperaldosteronism, congenital adrenal hyperplasia, pheochromocytoma).
9. Pituitary disease: panhypopituitarism, diabetes insipidus, SIADH, acromegaly, Cushing’s disease, hyperprolactinemia)
10. Recognize and refer to an endocrinologist the more uncommon endocrine diseases (e.g. inborn errors of metabolism, Cushing’s syndrome, pituitary dwarfism, pheochromocytoma, acromegaly, Klinefelter’s syndrome, Turner’s syndrome, Carcinoid syndrome)
11. Recognize and have a basic understanding of Endocrine Emergencies: Diabetic ketoacidosis/hyperosomolar state, hypoglycemia, acute adrenal insufficiency, pituitary failure, acute diabetes insipidus, severe, hypothyroidism, myxedema coma, severe hyperthyroidism, hypocalcemia, hypercalcemia, hyponatremia, hypernatremia.

5. Understand the indications and interpretation of tests of the function of the thyroid, pituitary, gonads, adrenals, parathyroids, and pancreas, as well as radioimmunoassay and radionuclide thyroid uptake studies and scans

***Practice Based Learning and Improvement***

***Residents must be able to use scientific methods and evidence to investigate, evaluate, and improve their patient care practices.***

1. Utilize Web-based resources such as Up-To-Date, MD Consult, and DynaMed to access the most current and evidence-based treatment guidelines

***Interpersonal and Communication Skills***

***Residents must be able to demonstrate interpersonal and communication skills that result in effective information exchange and teaming with patients, their families, and professional associates.***

1. Participate in brief case discussions with the Endocrinologist after each case and/or at the end of the day to discuss relevant patient care issues

2. Use non-technical language and effective listening skills when discussing work-up, diagnosis and treatment with patients and their families

***Professionalism***

***Residents must demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to diversity***

1. Consistently demonstrate appropriate professional and ethical behavior in all facets of patient care, including maintenance of patient confidentiality

2. Interact appropriately with the patients of the various ethnicities and cultures found in Williamsport and the surrounding rural communities

***Systems- Based Practice***

***Residents must practice quality health care and advocate for patients in the health care system***

1. Use PDA and text-based formularies to help provide the most cost-effective medications for patients

1. Diabetes, type 1 and 2, associated complications, prediabetes/diabetes prevention
2. Hypoglycemia (functional, pathological and diabetes treatment associated)
3. Obesity, nutrition and lifestyle medicine (partnership with mental health professionals)
4. Cardiovascular Endocrinology and CV risk reduction: hypertension including endocrine hypertension (hyperaldosteronism, Cushing’s syndrome and pheocoromocytoma), dyslipidemias, metabolic syndrome
5. Thyroid disorders: hypothyroidism, hyperthyroidism, thyroiditis, thyroid nodules, goiter and thyroid carcinoma
6. Bone and calcium disorders: Osteoporosis, vitamin D, parathyroid disease, hypocalcemia, hypercalcemia
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