Goals of Inpatient and Outpatient Clinical Training

The clinical training goals will be presented to the fellows during their initial orientation and will be repeated and reinforced annually and signed by the fellow and the Program Director. Goals may be modified annually based upon changing program requirements and feedback from the fellows. The fellow will keep a running list of diagnoses encountered in clinic and on the wards. Annually, the program director will review the list to ensure that the fellow is adequately exposed to the entire clinical spectrum of pediatric endocrinology. The goal of the training program is that the fellow will demonstrate competence in the six areas listed below:

PATIENT CARE: Acquire an understanding and appreciation for the care of infants, children, and adolescents with endocrine disorders. Develop the necessary skills for compassionate, appropriate, and effective patient care. Provide diagnostic, therapeutic and continuity care for endocrinology patients from infancy through adolescence.

A. Clinical skills:
   Obtain appropriate history and physical examination for patients referred with the following endocrine conditions. Order appropriate laboratory tests and formulate a treatment plan based on the diagnosis.
   1. Short stature
   2. Disorders of anterior pituitary hormone physiology, including growth hormone deficiency and late effects of brain irradiation
   3. Disorders of posterior pituitary hormone physiology, including diabetes insipidus
   4. Disorders of hypothalamic hormonal regulation
   5. Disorders of thyroid hormone physiology
   6. Diagnosis and management of endocrine neoplasia
   7. Disorders of the adrenal gland physiology
   8. Disorders of androgen and estrogen metabolism, including adolescent reproductive endocrinology
   9. Disorders of sexual differentiation and development
   10. Disorders of calcium, phosphorus, and vitamin D metabolism
   11. Disorders of parathyroid gland physiology
   12. Disorders of fluid and electrolyte balance
   13. Disorders of carbohydrate metabolism, including diabetes mellitus and hypoglycemia
   14. Disorders of nutrition, including eating disorders and obesity.

- Communicate effectively and demonstrate caring and respectful behaviors when interacting with patients and their families.
- Gather essential and accurate information about their patients.
• Counsel patients and families with chronic endocrine conditions, including diabetes education (the use of insulin pumps, different forms of insulin, blood glucose monitoring, carbohydrate counting) and new presentation of ambiguous genitalia.
• Make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence, and clinical judgment.
• Interpret and integrate medical literature into patient care.
• Use information technology to support patient care decisions and patient education.
• Develop and carry out patient management plans.
• Coordinate endocrine evaluation and therapies with consulting services.
• Work with health care professionals, including those from other disciplines, to provide patient-focused care.
• Provide health care services aimed at preventing health problems or maintaining health.

B. Diagnostic tests and procedures:
Arrange, conduct, and interpret diagnostic procedures and stimulation testing important in the evaluation of endocrine disorders, including ACTH, GH, GnRH stimulation testing, OGTT, CGMS testing, bone age interpretation, water deprivation test, MRIs, CTs, and nuclear medicine tests.

MEDICAL KNOWLEDGE: Understand the scope of established and evolving clinical and basic science knowledge of the endocrine system. Acquire the necessary information regarding the physiology and pathophysiology of endocrine systems to effectively care for infants and children with endocrine disorders.

PRACTICE-BASED LEARNING AND IMPROVEMENT: Acquire the skills that lead to investigation and self-evaluation of patient care, appraisal and assimilation of scientific evidence, and improvements in patient care.

• Identify personal learning needs, systematically organize relevant information resources for future reference, and plan for continuing acquisition of knowledge and skills.
• Demonstrate knowledge, skills and attitudes needed for continuous self-assessment and improvement.
• Use available evidence to investigate, evaluate and improve the care of patients with endocrine disorders.
• Analyze practice experience and perform practice-based improvement activities using a systematic methodology.
• Obtain and use information about their own population of patients and the larger population from which their patients are drawn.
• Present at Pediatric Endocrine Journal Club on a quarterly basis.
• Discuss with faculty clinic patients on a weekly basis at the pediatric endocrine
conferences.

- Present lectures to pediatric residents and medical students.
- Assume departmental administrative responsibilities.

**INTERPERSONAL AND COMMUNICATION SKILLS:** Develop the skills that lead to effective information exchange and teaming with patients, their families, and other health professionals.

- Demonstrate an ability to teach and communicate information effectively to audiences of varying backgrounds (i.e. lay public, medical students, residents, Pediatric Endocrinology colleagues).
- Understand the unique roles of the consultant, team leader and team member.
- Function effectively as part of an interdisciplinary team member in both the inpatient and outpatient setting.
- Show an understanding and empathy for patients with chronic endocrine diseases.
- Use good communication skills to quickly assess, assist patients and triage phone calls received while on call.
- Use effective listening skills and elicit and provide information using effective nonverbal, explanatory, questioning, and writing skills

**PROFESSIONALISM:** Demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population.

- Demonstrate a commitment to carrying out professional responsibilities, continued improvement, adherence to ethical principles and sensitivity to diversity.
- Provide emotional, social, and culturally sensitive support to patients and families with endocrine disorders.
- Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society that supercedes self-interest; accountability to patients, society, and the profession; and a commitment to excellence and on-going professional development.
- Identify and participate in community resources available to children and adolescents with diabetes.
- Advocate for children with endocrine disorders such as diabetes, obesity, short stature, intersex, etc.
- Become familiar with the ethical and medical-legal considerations of care of infants with intersex conditions.
- Demonstrate good practices related to patient confidentiality.
- Participate in diabetes camp.
- Complete HIPAA training.
- Complete Ethics Course as listed under Research Tracks.

**SYSTEM-BASED PRACTICE:** Demonstrate an awareness of and responsiveness to the
larger context and system of health care and the ability to effectively call on system resources to provide care that is of optimal value.

- Understand the economics of health care and current health care management issues, such as cost-effective patient care, practice management, quality improvement, and resource allocation. These topics will be covered on a regular basis during inpatient and outpatient service. In addition, the fellows will participate in annual seminars with presentations by invited speakers who have extensive experience with practice management.
- Practice high-quality fiscally responsible health care.
- Practice cost-effective health care and resource allocation that does not compromise quality of care.
- Function effectively as part of an interdisciplinary team.
- Properly document and code for billing purposes using ICD9 and CPT coding.
- Meet with coding specialists and members of the business office on an annual basis to formally review proper documentation and coding practices.
- Participate in continuing educational responsibilities.
- Participate in morbidity and mortality conferences to learn how to prevent medical errors and learn about clinical outcomes.
- Understand the importance and limitations of newborn screening in detecting congenital adrenal hyperplasia and congenital hypothyroidism.
- Appreciate the role of the Pediatric Endocrinologist in advocating for newborn screening programs.

**Year Specific Goals and Objectives 2012-2013**

In preparation for a career in academic pediatric endocrinology, each fellow completing the program is required to work towards and exhibit excellence in all six areas of the competencies as outlined in the goals and objectives of this manual. Since the fellows do not have rotation specific schedules and their clinical time is split evenly into 4 month blocks of on-service time each year, the goals and objectives of the program outline similar but graduated responsibilities and expectations for each successive year of training.

**Year 1 Responsibilities to Include:**

- **Become comfortable with the terminology for all goals and objectives for the fellowship program and account for progress in each area outlined. Focus on the following areas:**
- **PC:** Recognize the clinical presentation for each of the diseases outlined in the Section A of PATIENT CARE Competency. Fellow will also become familiar with all diabetes devices, participate in a trial of utilizing each device, and become comfortable with how to adjust settings/trouble-shoot each device. As inpatient fellow:
  - Attend rounds and follow patients with resident
  - If no resident available, collect inpatient data, and propose plan for each inpatient
  - Assist inpatient resident with new consultations
• MK: Understand the clinical scenarios where stimulation testing is required
• PBL: Comprehend the goals of individualized learning plan and outline needs for first year of fellowship
• I/CS: Identifying attributes of effective teacher; lead education session for new onset diabetes patient and their family.
• P: Identifying the different needs of type 1 diabetes families from different ethnic backgrounds and socioeconomic status
• SBP: Interpret the screening results for endocrine based diseases on the state newborn screening test

Research Goals and Objectives:
• Designate research mentor
• Define research hypothesis
• Outline research methodology to complete project over three years
• Complete bulk of Master’s course work (if applicable)

Year 2 Responsibilities to Include:
• Demonstrate an increasing independence in working towards meeting all goals and objectives of the program. Focus on the following areas:
• PC: Recall the molecular, genetic, and biochemical basis for the diseases outlined in the Section A of PATIENT CARE Competency. As inpatient fellow:
  o Conduct one 10-15 minute teaching round each week
  o Lead rounds on all diabetes patients
• MK: Explain how to interpret various endocrine stimulation tests
• PBL: Review goals of individualized learning plan and outline needs for second year of fellowship and for future career
• I/CS: Utilize learned teaching skills/attributes to present two journal clubs and 3M conference
• P: Become comfortable and effective in discussing diagnosis and plan with families during outpatient encounters.
• SBP: Identify areas within clinical practice where cost saving measures could be implemented

Research Goals and Objectives:
• Data Collection for research project
• Completion of Master’s courses if possible
• Primary author of case presentation or review manuscript

Year 3 Responsibilities to Include:
• Demonstrate mastery of the goals and objectives in all competencies outlined in fellowship manual. Focus on the following areas:
• PC: Recite the critical pieces of medical literature that have been tantamount to the evidence for therapeutic guidelines for each disease outlined in the Section A of PATIENT CARE Competency. As inpatient fellow:
  - Lead inpatient rounds for all patients
  - Conduct two 10-15 minute teaching rounds each week
  - Lead resident through generation of differential diagnosis and therapeutic options for all new inpatient consultations
• MK: Be comfortable giving 15 minute didactic sessions to the learner on areas listed in Section A of PATIENT CARE Competency
• PBL: Review goals of individualized learning plan from year two and outline needs for last year of fellowship and plans for what your needs will likely continue to be after fellowship
• I/CS: Effectively design presentation slides and discuss effective ways of communicating during a presentation.
• P: Become adept and comfortable at communicating with families during difficult situations on inpatient and outpatient environments
• SBP: Become familiar with billing guidelines for inpatient and outpatient visits

Research Goals and Objectives:
• Complete Master’s thesis (if applicable)
• Take lead author role for peer-reviewed manuscript based on research during fellowship
• Complete supplementary academic work including poster presentations, platform presentations, review manuscripts, case presentations.