

Pediatric Endocrinology and Diabetes Fellowship Policies and Handbook

Phoenix Children's Hospital

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Fellowship Objectives

- A. The mission of the Pediatric Endocrinology Fellowship at Phoenix Children's Hospital (PCH) is to educate pediatricians in preparation for the independent practice of pediatric endocrinology. Graduates of the fellowship will be capable of practicing competently and with a highly ethical and humanitarian approach. Graduates will possess enough clinical and research experience to have the choice of entering into a career in academic medicine, industry or private clinical practice.
- B. The fellowship is structured to provide broad and in-depth clinical training in the field of pediatric endocrinology, metabolism and clinical nutrition. This includes diseases of the pituitary, thyroid and adrenal glands; diabetes mellitus and the metabolic syndrome; hypoglycemic syndromes; lipid disorders; calcium disorders and metabolic bone disease; oncologic endocrinology; childhood growth and development; nutritional counseling; and endocrine diagnostic testing. A key goal of the fellowship education is successful completion of the subspecialty board examination in pediatric endocrinology.
- C. Each fellow is required to participate in a scholarly project under the mentorship of a faculty member. It is expected that the fellow's involvement will be of sufficient intensity to lead to an abstract presentation and authorship of a manuscript. A more complete description of scholarly activity requirements is provided below.
- D. Fellows are expected to develop their oral and written communication and teaching skills by organizing and leading resident, student, and nurse education sessions; via formal patient presentations; and through other scholarly work. This work includes consistent involvement in clinical conferences, textbook chapter reviews, and journal article reviews. Fellows will both prepare for and participate in such discussions on a weekly basis.
- E. The fellow will learn to function as an integral member of a multidisciplinary team in the provision of excellent patient care. This multidisciplinary team includes, first and foremost, patients; also, pediatric endocrinologists; nurses and certified diabetes educators; dietitians; social workers; child life specialists; other subspecialists (e.g. ophthalmologists, podiatrists, etc.); and primary care providers.
- F. Throughout fellowship training, emphasis is placed on fostering the ability to form and maintain effective physician-patient relationships. Fellows will also strive to develop and maintain a code of professional ethics to guide their daily practice, as well as a commitment to improving of the lives of patients and their families.
- G. Fellows are expected to attend all core conferences and meetings except when excused for vacation, CME, leave of absence or unexpected emergencies.
- H. Fellows are required to keep a log of all patient encounters during their training, both inpatient and ambulatory.
- I. During their course of study, fellows are expected to develop a strong fund of knowledge commensurate with that obtained from reading and comprehending a major pediatric and/or general endocrinology textbook, or from comprehensive review of current peer-reviewed literature in pediatric endocrinology.
- J. Each fellow will be required to mature in his or her ability to select appropriate diagnostic testing for evaluation of common pediatric endocrine disorders. The fellow will also become competent in the interpretation of results of common endocrine laboratory tests; stimulation and suppression tests; histopathology slides; and bone age X-ray, brain MRI, and other common imaging studies used in the evaluation of pediatric endocrine patients.
- K. Fellows are encouraged to attend at least one major or national medical society meeting per year. One week of paid CME time per fellow per year is provided, but this time may be expanded, if necessary, following authorization from the fellowship program director.

Curriculum Content Outline **:

See Medical Knowledge Curriculum (Competency-Based)

** Modified from the American Board of Pediatrics endocrinology subspecialty examination content outline.

Facilities and Resources

- A. Phoenix Children’s Hospital and its clinics, Thomas and McDowell campuses
- B. Phoenix Epidemiology and Clinical Research Branch of the NIDDK (National Institutes of Health)
- C. (Adult) Endocrinology, Diabetes and Metabolism Fellowship – Carl T. Hayden Veterans Affairs Medical Center and Banner Good Samaritan Medical Center
- D. Banner Good Samaritan Positron Emission Tomography Center
- E. Arizona State University

Clinical Curriculum Plan By Year Of Training

Year	Duration	Inpatient Experience	Outpatient Experience	Call (one week duration/call)
First year of training	12 months	12 months Daily rounds with attending staff	4 half day clinics in afternoon (3 continuity + 1 elective clinics) 188 half-day clinics/year	Q 3 weeks (17-18 weeks/year)
Second year	12 months	2 months per year (cumulative)	2 half day clinics (1-2 continuity + 0-1 elective clinics) 94 half-day clinics/year	Q 6 weeks (8-9 weeks/year)
Third year	12 month	2 months per year (cumulative)	3 half day clinics (1-2 continuity + 1-2 elective clinics) 141 half-day clinics/year	Q 6 weeks (8-9 weeks/year)
Total	36 months	16 months	423 half-day clinics	34 weeks

Inpatient Experience (Primary Patients and Consults)

- A. Full pediatric endocrinology inpatient services are provided by the Endocrinology and Diabetes Section at Phoenix Children’s Hospital and at the PCH Neonatal Intensive Care Unit on the McDowell Campus (inside Banner Good Samaritan Medical Center). For fellows, the inpatient experience includes rounds, performing initial and follow-up consultations, and handling primary admissions and discharges. During the first year, the fellow has inpatient duties every weekday, unless a senior fellow is on call and is therefore covering the inpatient service. The first year fellow also takes pager call every third week, for a week at a time, providing 24-hour coverage. Senior fellows take call every sixth week, which involves the same inpatient rounds, weekend rounds, and pager coverage. However, when senior fellows are not on call, they do not have inpatient responsibilities, as a key focus of the second and third years of fellowship is demonstrating scholarly activity.

- B. The attending endocrinologist on call for the week supervises all inpatient activity. This attending is also available 24 hours per day for support of the fellow on call, should questions arise from daytime or nighttime phone calls that are handled by the fellow. Inpatient rounds with the fellow, any rotating residents and medical students, and the attending faculty member take place in the morning or late afternoon (before or after clinic). Inpatient rounds last about one hour each weekday. Team members will formally present each patient, allowing for open discussion and the formation of a management plan. The plan will finally be discussed with the patient, family, and multidisciplinary team (as is appropriate).
- C. Telephone (pager) call duties include fielding questions from families and patients that are part of the PCH Endocrinology and Diabetes Section's practice, including patients with diabetes mellitus, panhypopituitarism, congenital adrenal hyperplasia, and other endocrine disorders. When on call, it is provided continuously, 24 hours per day, for one week at a time. Pager coverage also includes handling questions about any inpatient or emergency department patient, including nighttime admissions, intensive care unit patients, transfers from outside facilities, and current inpatient admissions and consults. Fellows may be paged, therefore, by the answering service, by physicians, by nurses, or by ancillary hospital staff. The intensive care units and wards have systems in place (such as resident teams, non-teach service, etc.) to cover nighttime admissions until patients may be seen by the endocrine team the following morning. In rare circumstances, the fellow may be required to go to PCH at night to handle difficult cases that require immediate assistance.
- D. In conjunction with the attending on call, the fellow responsible for the inpatient service participates in educating the pediatric senior residents at weekly teaching sessions (typically held on Tuesdays at 8:45 AM).
- E. When not on call, the first year fellow is excused from rounding on Thursdays to allow full participation at the weekly combined adult/pediatric endocrinology didactic session.

Ambulatory Experience

Continuity Clinic

- A. To gain experience in managing ambulatory patients (both established and new consults), first year fellows perform four half-day clinics per week, held in the afternoon to allow for morning rounds on inpatients. This also allows time for independent study, attending conferences, and planning scholarly activities for the second and third years of the fellowship. Second and third year fellows perform two and three half-day clinics per week, respectively. This allows more time for scholarly activities. The bulk of the outpatient experience is obtained during the first year.
- B. Outpatient clinics are arranged so that the fellow has a mix of both new consults and follow-up patients to see in each half-day clinic. Patients will also be mixed in terms of diagnosis, with some clinics providing mostly diabetes patients and others providing mostly endocrine patients, depending on the attending endocrinologist's schedule. Scheduling for the fellow is structured to provide 50% diabetes patients and 50% endocrine patients throughout the course of study. All aspects of patient care, diagnosis and management performed by the fellow are guided by the direct supervision of attending endocrinologists.
- C. Follow-up of all laboratory and imaging studies is provided after discussion of results with the appropriate attending endocrinologist, and will typically be provided in the form of a telephone conversation with the parent (or patient, if over 18 years old). This includes all results, whether normal or abnormal.
- D. Diabetes treatment plans are developed in conjunction with a multidisciplinary team, including the patient and family, endocrinologists and fellows, certified diabetes educators, dietitians, social workers, child life specialists, and primary care provider. Diabetes assessment and treatment plans are augmented by in-office analysis of hemoglobin A1c.
- E. Regarding continuity of care, fellows are required to follow patients over time. Regular scheduling of patients directly into the fellows' clinic schedules allows for this to occur. Patients, families and fellows alike appreciate such established relationships and the benefits they provide for quality patient care. A

balance between new consults and follow-up patients is typically achieved by mid-first year, when the fellow has established a group of patients which he or she follows regularly. Fellows also regularly follow newly diagnosed diabetes patients in clinic after caring for them in the inpatient setting.

- F. Regarding newly diagnosed diabetes patients, fellows participate in daily insulin dosage adjustments as part of their on-call duties. Families call in nightly to report blood glucose values for about one week after discharge home from PCH. When on call, the fellow makes decisions regarding insulin dose adjustments, communicates them with the family, and finally shares them with the attending endocrinologist.

Elective (Subspecialty) and Optional Clinics

Also available to fellows are several elective clinics that comprise a portion of their outpatient experience. These clinics include Metabolic Syndrome Clinic, Young Adult Clinic, Oncology Late Effects Clinic, and Neuro-oncology Clinic. Dr. Tala Dajani, one of the attending endocrinologists, coordinates these clinics. Outside clinic experience includes a bone disease and thyroid disorders clinic with Dr. Sylvia Vela at the VA Medical Center. As per above, the fellow has one half-day elective clinic per week during the first and second years of fellowship, increasing to two half-day elective clinics per week during the third year. Fellows may rotate among these clinics for a broad-based experience during the course of their training. Formal schedules are created after discussion with Dr. Dajani.

In addition to these electives, an optional free clinic is available for one half-day per month at the St. Vincent de Paul Clinic in Phoenix. Fellows may see pediatric and adult endocrinology patients without medical insurance in this clinic, and there is great potential for unusual and interesting cases. The clinic is offered on the fourth Tuesday of each month, and is supervised by Dr. Jerome Targovnik (semi-retired endocrinologist).

Other Rotations

Rotation	Schedule	Staff Attending
Radiology Review	Predetermined Thursday afternoon, to total 4-6 sessions per year; review of pertinent radiology studies (e.g. pituitary MRIs, bone age films, etc.)	Dr. Schaefer
Histopathology review	Predetermined Thursday afternoon, to total 4-6 sessions per year; review of pertinent slides with pathologist	Drs. Carpentieri and Dickman
Research Clinic	Predetermined half day study design session, 4-6 sessions per year	Dr. Dajani

Technical Skills

A. Diabetes Mellitus – Fellows attend practical workshops during their first year of fellowship on nutritional instruction of diabetes (including carbohydrate counting), glucose monitoring devices and continuous insulin infusion devices. As part of this experience, fellows participate in initiating insulin pump therapy for patients.

B. Laboratory tests and imaging studies – Fellows gain experience in interpretation of laboratory tests by daily discussion with attending endocrinologists and with laboratory reference data. Fellows also review imaging study results with on-site radiologists. Available imaging modalities include CT, MRI, ultrasound, invasive radiology (including adrenal vein sampling), and nuclear medicine (including thyroid, parathyroid imaging, imaging of endocrine tumors, interpretation of bone density studies). Fellows also attend tumor board sessions when appropriate, as well as joint endocrine/nuclear medicine conferences when scheduled.

C. Endocrine Dynamic Testing – Fellows learn to perform standard dynamic testing procedures, such as ACTH stimulation testing, GnRH stimulation testing, GH stimulation testing, and hCG stimulation testing. Fellows also use laboratory reference manuals and available protocols to assist with interpretation of dynamic testing results.

Conferences and Formal Instruction

Many scheduled conferences and meetings are available for the fellow to attend. These include monthly tumor board meetings, clinical genetics conferences, biweekly pediatric endocrine clinical conferences, and weekly combined adult/pediatric endocrinology didactic sessions. The PCH endocrine faculty attends all of these meetings as well.

Scope of Curriculum

In addition to the breadth and depth of clinical experience provided by the fellowship, the training also provides formal, didactic instruction and opportunity for ongoing independent study in the following areas:

1. Thyroid disorders, including hyperthyroidism, hypothyroidism, thyroid cancer, benign thyroid nodules and goiters.
2. Hypothalamic and pituitary diseases, including pituitary tumors, craniopharyngioma, hypopituitarism (including isolated hormone deficiencies), syndrome of inappropriate antidiuresis, and diabetes insipidus.
3. Type 1 and type 2 diabetes mellitus, including but not limited to: management of hypo- and hyperglycemia; maintenance of euglycemia; prevention of acute complications (e.g. hypoglycemia and DKA); prevention and management of chronic microvascular and macrovascular complications (including retinopathy, nephropathy, neuropathy, coronary artery disease, peripheral vascular disease and cerebrovascular disease); diabetes in pregnancy; perioperative management of diabetes; diabetes nutrition and education; genetics of diabetes; and psychosocial issues related to diabetes.
4. Hypoglycemic disorders, including congenital hyperinsulinism, insulinoma, and all causes of postprandial and postabsorptive hypoglycemia.
5. Lipid disorders.
6. Essential and secondary hypertension.
7. Disorders of bone and mineral metabolism, including hypo- and hypercalcemia, hypo- and hyperphosphatemia, metabolic bone disease, nephrolithiasis, vitamin D disorders, and hyperphosphatasia.
8. Disorders of the adrenal cortex and medulla, including Cushing's syndrome, Addison's disease, incidental adrenal tumors, pheochromocytoma, and adrenogenital syndromes.
9. Disorders of fluid, electrolyte, and acid-base metabolism, including hypo- and hypernatremia, hypo- and hyperkalemia, and metabolic acidosis and alkalosis.
10. Disorders of magnesium and phosphorous metabolism.
11. Endocrine aspects of psychiatric disease.
12. Endocrine emergencies, including diabetic ketoacidosis, hypo- and hypercalcemia, thyroid storm, myxedema coma, adrenal crisis, and pituitary apoplexy.
13. Nutritional and eating disorders, including obesity, anorexia nervosa and bulimia nervosa.
14. Hormone-producing neoplasms, including carcinoid syndromes, ectopic hormone production, islet cell tumors and multiple endocrine neoplasia syndromes.

15. Disorders of male and female reproduction, including primary and secondary amenorrhea; hirsutism and virilization; ovarian hyperandrogenism; dysfunctional uterine bleeding; gynecomastia; and hypogonadism.

16. Disorders of sexual maturation, including precocious and delayed puberty, isolated premature thelarche, and isolated premature adrenarche.

17. Endocrine abnormalities in systemic illness.

Specific Educational Opportunities

- A. Essential to the successful preparation of the fellow for the subspecialty board examination and for future practice is the weekly combined didactic session. Every Thursday, from 10:00 am until 1:00 pm, each fellow is required to attend a formal educational meeting with the fellows and attending faculty of the (adult) Endocrinology, Diabetes and Metabolism Fellowship of the Carl T. Hayden Veterans Affairs Medical Center and Banner Good Samaritan Medical Center. A two-year curriculum is established, and all fellows are required to read and/or present (per rotation) the entirety of DeGroot's 5th Edition Endocrinology textbook over the course of two years. Each pediatric fellow, therefore, will go through the text 1.5 times by completion of the fellowship. Following the textbook chapter review in the first hour, fellows participate in a journal club over the second hour. The third and final hour is devoted either to case presentations or research and statistics lectures (led by Dr. Richard Gerkin – see below). The overall didactic session is moderated by Dr. Sylvia Vela and provides a wealth of experience in critical review of research articles, a thorough study of current knowledge of basic and clinical endocrinology, and exposure to classically adult endocrinology topics that are becoming more important in pediatric endocrinology. The pediatric endocrinology faculty also attend these educational sessions, and, along with several community endocrinologists, they present interesting and challenging cases to the group. In addition, on the third Thursdays of each month, following the didactic session, the fellow is provided a histopathology conference to review thyroid needle aspiration, biopsy, and surgical tissue specimens.
- B. The fellow will participate in a biostatistics/epidemiology course provided by Dr. Richard Gerkin during the combined adult/pediatric endocrinology didactic sessions, on a monthly basis. The first half of each year is spent on biostatistics, and the second half on epidemiology, though the course is continuously provided during all three years of fellowship. Covered topics include basic biostatistics, research methodology, study design, and principles of evidence-based medicine.
- C. Also available is a laboratory-based cytogenetics experience under the guidance of the pediatric pathology division (Drs. Paul Dickman and David Carpentieri). Current methods of hormone measurement and a review of endocrine histopathology are taught through tutorial sessions in the pathology laboratory.
- D. An ethics course dealing with issues confronting a subspecialist in pediatrics is available as well. This is a two-week course given in parts throughout each year. The medical ethics curriculum is coordinated by Dr. David Beyda, who, in addition to being a faculty intensivist at PCH, is a visiting Senior Research Scholar at the Kennedy Institute of Ethics at Georgetown University. In addition, Hospice of the Valley provides an annual conference on coping with death and dying.
- E. Psychosocial issues, as they relate to patient care, are discussed with the assistance of various members of the multi-disciplinary team. These include a social worker and child life specialist. There are formal didactic sessions with the staff psychologists as well.
- F. Opportunities for involvement in leadership positions, such as serving as a committee chair on the board of the Phoenix Children's Diabetes Center (PCDC), planning the youth zone activities for the annual ADA Diabetes Expo, or planning the teen program for the annual diabetes summer camp (Camp AZDA), are available to both junior and senior fellows. Attendance at the one-week Camp AZDA is mandatory during all three years of fellowship.

- G. Drs. Kirk Aleck and Terry Grebe are former PCH geneticists and faculty members of the University of Arizona. They offer a monthly genetics seminar for fellows, as well as an optional one-month rotation. Emphasis is placed on genetic counseling, cytogenetics and dysmorphic syndromes as they relate to pediatric endocrinology.

Scholarly Activity Curriculum Plan By Year Of Training

Year	Scholarly activities	Core Conferences	Evaluation
First year	1 half day 47/year	Weekly Fellowship Didactic	Quarterly competency review
Second year	6 half days 282/year	Weekly Fellowship Didactic	Quarterly competency review
Third year	5 half days 235/year	Weekly Fellowship Didactic	Quarterly competency review
Total	564 half days	141 half days	12 reviews

Scholarly Activities

Scholarly activities (1 to be accomplished per year):

1. Study design
2. Statistical analysis
3. Literature review
4. Fellowship project
5. Abstract presentation: case report or primary research

Scholarly activity timeline:

1. First year: Formal scholarly activity project is to be chosen by end of first six months, with mentorship established. Project timeline is to be defined by the ninth month of fellowship.
2. Second year: The scholarly activity project is to begin within the first two months. Completion of goals should be achieved before end of fellowship.

Research experience begins in the first year. Study design, use of informed consent, research methodology, collection and interpretation of data, and medical statistics are among the areas of emphasis in the combined adult/pediatric endocrinology didactic sessions.

During the first year, the fellow is provided interaction with various researchers in the field of endocrinology and diabetes at PCH, Banner Good Samaritan Medical Center, Carl T. Hayden VA Medical Center, and the PECRB of the NIDDK/National Institutes of Health. By the end of the first year, a specific scholarly activity mentor is to be identified, and this relationship will carry through for the second and third years. A review of the scholarly activity project will be made with the fellow's Scholarship Oversight Committee at the beginning of the activity and then on a periodic basis. The most common goal of such activity is to publish research findings in a peer-reviewed medical journal and/or present an abstract of the research findings at a major/national society meeting.

The scholarly activity mentor will directly supervise, provide support, and provide guidance in the preparation of manuscripts during the second and third years. This will be done with the SOC and with the entire endocrine faculty on an on-going basis at weekly journal conferences. The presentations made by the subspecialty resident will be critiqued and guidance offered as appropriate.

Fellow Teaching Responsibilities

The fellow is required to give formal, didactic lectures to nurses, medical students, residents, coworkers, and other audiences as need dictates. Regularly scheduled lectures include a general overview of pediatric endocrinology lecture that is given every six weeks to rotating junior medical students. Another such lecture is an overview of management of diabetic ketoacidosis, which is given to critical care nurses every few months. Other lectures arise according to schedule, and fellows are made aware of lecture responsibilities well in advance of the lecture date. Responsibility for giving the various lectures is divided equally among the fellows in the program, regardless of year of training. In addition, case presentations and other didactic presentations are required for the combined adult/pediatric endocrinology didactic sessions, and a schedule is provided at the start of each academic semester.

In addition to these formal lectures, the fellow is responsible for day-to-day teaching of residents and medical students that are rotating through the endocrinology department, and of ward and ICU residents who are co-managing endocrine inpatients. A weekly endocrine session is assigned for the inpatient senior resident subspecialty team, for example, and the fellow covering the inpatient service is required to attend and help lead this session.

Paid Time Off and CME

Three weeks of paid time off (for vacation, sick time, and holidays) and one week of continuing medical education (CME) time are provided to the fellow each academic year. This provides a framework of expectations for both the endocrine fellow and attending endocrinologists. It is not understood as a strict contract or “covenant” between Phoenix Children’s Hospital and the fellow. It is agreed that this mutually beneficial arrangement between the faculty and the fellow may require amendment as particular circumstances arise (e.g. extra time for CME, etc.).

Relationship To Other Training Programs

- A. Fellows will have direct interaction with residents of the PCH/Maricopa Medical Center Pediatric Residency Program and of its combined internal medicine/pediatric training program(s). Interaction with PCH Pediatric Emergency Medicine fellows will occur on mutual patients and at mutual case conferences. In addition, fellows will have direct contact with third and fourth year medical students from the University of Arizona and other medical schools. The fellow has overlap in patient care with other fellows represented at PCH (academic, neurosurgery, and intensive care), as well as with the general faculty. The fellow interacts with family medicine residents from Mayo (Scottsdale), Banner Good Samaritan Medical Center, and other programs who do their pediatric rotations at PCH. The fellow also has contact with various residents at Camp AZDA.
- B. There is frequent interaction with adult endocrinology fellows at Banner Good Samaritan Medical Center/Carl T. Hayden VA Medical Center, which is an ACGME-accredited fellowship program. The adult fellows each spend one month in pediatric endocrinology rotation at PCH, and the weekly combined adult/pediatric endocrinology didactic sessions involve the faculty and fellows of this program.

Evaluation Of Fellows

Each PCH Endocrinology and Diabetes Section faculty member uses competency-based evaluation and feedback forms to evaluate the fellow’s performance at least monthly. This form assesses performance, knowledge, clinical skills and professional attitude. Outside faculty, referring physicians, ancillary staff, patients and families will be requested to give feedback using 360° evaluation tools. Evaluation by the research mentor will be obtained through the scholarly oversight committee (SOC) which is attended by the program director. The fellow is encouraged to read and respond to these quarterly evaluations, as they will be kept on file by the Program Director. The acquisition of skills necessary to make an independent, logical and directed management plan will be assessed using the feedback implement, and will be discussed at the biannual meeting with the Program Director. A formal, written evaluation results from discussion of these evaluation forms with the Program Director. This biannual report is then

made available to the fellow by the Program Director. In addition, a self-evaluation will be performed by the fellow, also on a biannual basis.

The attainment of clinical skills, both in the inpatient and outpatient settings, will be monitored on a continual basis, and the faculty will provide direct feedback. Scheduled journal clubs and conferences are another forum for feedback to the subspecialty resident on an on-going basis, and many lectures provide direct feedback in the form of evaluation sheets that are completed by attendees.

Evaluation Of Attending Faculty and Fellowship Program

The fellow will also evaluate the endocrine attending faculty regularly. A faculty feedback form will be provided to the fellow at least semi-annually. Comments of the teaching ability, clinical knowledge and scholarly activity of the faculty will be made. Also, evaluation of the program will be made through semi-annual retreats. The fellows through an administrative assistant will provide an “anonymous” evaluation of the fellowship program. The Program Director will have an open door policy so that resolution of any perceived problem with a faculty member may be addressed. A formal discussion of the program and the faculty will be made at the biannual meeting with the Program Director and subspecialty resident. The Program Director will file all written evaluations.

The quarterly evaluations obtained from fellows, in addition to the evaluations provided by the pediatric residency rotators, will be used to modify and improve the program on a biannual basis, or more frequently as is necessary.

A meeting of the PCH/MMC PRP Program Directors and the PCH endocrine faculty (including the fellowship Program Director) will be held on a biannual basis, with the goal of enhancing the endocrine fellowship program and ensuring continued quality education. The Program Director is responsible to provide monthly updates of the fellowship to the faculty council.

Faculty Attending Responsibilities and Expectations

A. Teaching responsibilities

Attending faculty are responsible for delivering formal lectures to the fellows on a regular basis. The curriculum for the attending lecture series parallels the curriculum in place for the weekly combined didactic sessions with the adult endocrinology fellows. This gives a greater opportunity for the fellow to be exposed to the pediatric-specific aspects of the various topics covered in the joint didactic series. The attending faculty rotation is designed to provide formal, monthly lectures to the fellows.

In addition to formal lectures, the faculty attending supervising the fellow during regular patient care experiences is required to offer instruction, clarification, and assistance to the fellow. This includes differential diagnosis, evaluation, management aspects, ethical and social considerations that impact patient care, and many other forms of informal education. The faculty is also required to regularly attend scheduled fellowship didactic conferences in order to participate in discussion and provide necessary pediatric endocrinology “pearls of wisdom.”

B. Supervision of patient care

Fellows are required to staff all patients with an attending physician, whether this be in the outpatient or inpatient setting, and regardless of postgraduate year. Fellows shall not participate in the care of patients outside of this relationship unless first cleared with the program director, or unless as part of a moonlighting experience after obtaining the necessary licensure, privileges, and insurance coverage. Attending faculty members are responsible for the care provided by the fellow as part of the training experience, and they are therefore required to be involved with direct supervision of the quality of care provided by the fellow. This also provides for a mechanism for evaluation of the fellow’s progress and overall clinical competence.

C. Code of conduct

Faculty attendings are to set good examples for the fellow in their behavior and interactions with other staff members, other faculty, and with patients. Any objectionable behavior should therefore be reported first to the program director, and then to the director of medical education and pediatrician-in-chief if the issue is not resolved.

Fellowship Orientation

Fellow Duties:

1. Patient Care

- a. First academic year
 - i. 4 half-day clinics each week, in afternoons (3 continuity plus 1 elective)
 - ii. Daily morning inpatient rounds on weekdays (weekends only when on call; no inpatient rounds when a senior fellow is on call)
 - iii. Call Q 3 weeks, switching at noon on Fridays
- b. Second academic year
 - i. 2 half-day clinics each week (1-2 continuity plus 0-1 elective)
 - ii. Call and inpatient rounds Q 6 weeks
- c. Third academic year
 - i. 3 half-day clinics each week (1-2 continuity plus 1-2 elective)
 - ii. Call and inpatient rounds Q 6 weeks
- d. Call duties
 - i. The duration of call responsibilities is one week. Call begins on Friday morning at 8:00 a.m. and ends after rounding the following Friday morning. Checkout to the next physician on call typically occurs at noon. The physician beginning call is responsible for handling new admissions and consults that are called after 8:00 a.m. The first full day of rounding for call weeks is therefore Saturday.
 - ii. The fellow is always on call with an attending faculty member. Any questions regarding phone calls or patient care should be directed to the on-call attending.
 - iii. All primary endocrine patients and consults are seen daily unless otherwise directed by the on-call attending.
 - iv. In addition to daily inpatient rounds and care, the on-call fellow must handle telephone questions from the inpatient staff, the emergency department, the various ICUs, and community physicians.
 - v. Fellows on call are given any abnormal newborn endocrinopathy screening results, and are required to contact the primary physician and/or family to ensure appropriate follow-up evaluation and treatment.
 - vi. After hours, any patient (or parent) that is within the Endocrinology and Diabetes Section's scope of care may call the hospital operator and request a physician call-back for any urgent issues that arise. Fellows commonly handle concerns about diabetes mellitus home management (errors in insulin administration, ketosis, insulin pump malfunctions, etc.), sick-day management of adrenal insufficiency, etc. In addition, newly-diagnosed diabetic patients are asked to call in their blood glucose levels every evening until they stabilize (usually within 6-10 days), and fellows manage those calls as part of their call duties. As always, the on-call attending is available to assist with any urgent questions the fellow might have.
- e. Documentation
 - i. All outpatient encounters and hospitalizations require a written note for the chart PLUS a letter or discharge summary to be sent to the referring physician.
 1. Inpatient: daily progress note (pre-printed template or SOAP note) PLUS dictated summary at time of discharge (for primary endocrine patients)
 2. Outpatient: handwritten progress note PLUS dictated or electronically-generated letter (using PedEndo EMR)

- ii. All patient encounters must have a record kept in the fellow's personal file or log. The patient's name, medical record number, date of birth, date of visit, attending physician, diagnoses, and whether it is a follow-up or a new patient should be documented. Each fellow is responsible for keeping a record of his or her encounters on file.
- iii. Patient care telephone calls shall be documented on pre-printed call sheets and entered into the patient's permanent medical record (either paper or electronic).
 - 1. Physician courtesy calls and on-call telephone conversations about the Endocrinology and Diabetes Section's patients (or prospective patients) shall also be documented on pre-printed call sheets and should ultimately be placed into the permanent medical records of those patients being discussed.
 - 2. E-mail dialogs between the fellow and his or her patients (or their parents) shall also be printed out and placed in the permanent medical record.
- f. Fellows are required to participate with the annual Camp AZDA (diabetes camp), which begins on the 2nd Saturday of June each year and lasts for 8 days. Fellows are responsible for serving as medical staff members and manage the medical care of 1-2 cabins (or tents) of diabetic children. This experience is considered part of the normal working requirements, and PTO hours are therefore not used. Absences are only allowed when authorized by the program director.

2. Scholarly Activity Requirements

- a. Fellows should refer to the previous sections of this curriculum document regarding formal education and scholarly work opportunities and responsibilities: Conferences And Formal Instruction; Scholarly Activity Curriculum Plan By Year Of Training; Scholarly Activities; and Fellow Teaching Responsibilities.

Orientation Checklist

- Shadow Fran Hoekstra for one endocrine nursing day
- Shadow Julia Wise for one endocrine nursing day
- Shadow Julie Gerke for one diabetes education/nursing day
- Shadow Samantha Kar for one diabetes education/nursing day
- Shadow April Callahan for one nutrition education day
- Shadow an MA for one day; learn how to measure children, where to find proper chart forms, how to download meters and pumps, and how to do use the DCA-2000 HbA1c machine
- Attend three-day, inpatient, new-onset diabetes mellitus education and follow nightly blood sugars on that patient after discharge
- Attend an intensive management class
 - o Calculate carbohydrate:insulin ratios and insulin sensitivity factors for the patients attending this class
 - o Follow one of the patients' blood sugars for 1-2 weeks after the class
- Attend an insulin pump start session
 - o Calculate the carbohydrate:insulin ratio and insulin sensitivity factor for the patient
 - o Follow the patient's blood sugars for 1-2 weeks after the class
 - o Adjust the basal rates as needed with assistance from the educator and/or attending physician
- Observe a growth hormone stimulation test and follow up on the patient's results
- Observe a GnRH/LHRH stimulation test and follow up on the patient's results
- Observe an hCG stimulation test and follow up on the patient's results
- Observe an ACTH stimulation test and follow up on the patient's results
- Observe a growth hormone stimulation test and follow up on the patient's results
- Attend an adrenal insufficiency patient education session
- Attend a new human growth hormone patient's initial education session
- Attend an education session for a patient starting on DDAVP for central diabetes insipidus
- Learn how to use PedEndo EMR for patient data entry, generation of letters, etc.
- Learn how to set up your clinic and call schedules with Kim Geiger