

**LSUHSC**  
**Allergy/Immunology**  
**Fellowship Program**  
**Manual**



# LSUHSC ALLERGY/IMMUNOLOGY FELLOWSHIP PROGRAM

## I. Introduction

The Allergy/Immunology Fellowship at LSU Health Sciences Center (LSUHSC) provides training and experience to prepare the participant for a career in allergy/immunology and certification in Allergy and Immunology by the American Board of Allergy and Immunology. The program has been ACGME certified since 1992. Dr. Kenneth Paris is the Fellowship Director and Interim Division Chief of Pediatric Allergy/Immunology. Dr. Ricardo Sorensen, Dr. Augusto Ochoa, Dr. Victoria Dimitriades, Dr. Luke Wall, Dr. Prem Kumar, and Dr. Sanjay Kamboj round out the clinical teaching Faculty. Dr. Lily Leiva, head of the Immunology lab, supports research activities of the division.

The Fellowship Program is two years in length. During the fellowship period, the trainee gains extensive inpatient and outpatient experience in the diagnosis and management of patients with asthma, allergic disorders, and clinical disorders of the immune system. The Fellow also learns to provide both Allergy and Immunology consultation for patients on other clinical services. In addition to clinical training, the Fellow will learn techniques of immunology research and participate in the various scholarly activities of the division. In order to allow the Fellow to develop and mature both clinical and scholarly skills, each year of training of the Program is divided between clinical training and time allocated to scholarly activity/research.

## II. A. General Goals for Allergy/Immunology Fellowship at LSUHSC

The Fellowship Program of the Division of Allergy/Immunology at LSUHSC, New Orleans prepares the trainee for a career in allergy, asthma and immunology. We aspire to inculcate the Fellow with high standards of professionalism, both in research and patient care, as well as a commitment to continued learning and self-improvement. In developing the program, we present the Fellows with the opportunity for varied clinical and research experiences that will give them the flexibility and confidence to have successful careers in either academic or clinical Allergy/Immunology.

At the completion of our two-year training program, the graduate should be comfortable and competent in the following areas:

1. The clinical art and practice of both inpatient and outpatient clinical diagnosis and management of children and adults with asthma, allergic disorders, and clinical disorders of the immune system in a diverse patient population.
2. Knowledge in the selection, understanding and interpretation of diagnostic procedures and assays of allergy and immunity
3. Facility in conducting both inpatient and outpatient allergy and immunology consultations requested by other physicians and communication of management advice back to the requestor
4. Critical reading, interpretation and application of immunology and allergy literature

5. Understanding principles of ethical clinical research, involving both children and adults. Participation in and recruitment of subjects for clinical research.
6. Research design, implementation, collection of data, analysis and reporting of research data.
7. Presentation of research data at national specialty meetings.
8. Preparation of scholarly work product (manuscript, abstract/poster, grant proposal or similar).
9. Competence in teaching.
10. Experience and comfort in communicating and working with patients, family members, medical students, colleagues, support staff and other physicians for the greatest benefit of the patient
11. Preparation and presentation of allergy and immunology educational material to other physicians and to families/patients.
12. The Fellow will be prepared to sit for the certification examination in Allergy and Immunology by the American Board of Allergy and Immunology.

### **Curriculum**

1. **Clinical**: The clinical training in Allergy/Immunology will give the Fellow practical experience with direct patient contact for the assessment, diagnosis and management of a broad spectrum of allergic and immune disorders. The Fellow receives direct supervision on a case by case basis from the Attending Faculty. Clinic presentations allow the Fellow to learn about clinic patients seen by other members of the team as well. Follow-up and discussion of patient lab results from clinic occur during weekly patient meetings. The clinical experience will be supplemented by formal case presentations and discussions in division meetings. In addition over the course of each year, the Faculty present a formal series of didactic conferences which complement the Fellow's clinical experiences. Clinical topics covered in didactic sessions for Fellows include:

Anatomy of the nose and sinuses	Hereditary Angioedema
Rhinitis	Congenital Immunodeficiencies
Sinusitis	Systemic Autoimmune Diseases (RA, SLE)
Otitis	Immunologic Gastrointestinal Disease
Conjunctivitis	Laboratory Evaluation of Immunity
Allergen Immunotherapy	Mastocytosis
Anaphylaxis	Urticaria
Hypersensitivity Pneumonitis	Immune complex mediated disease
Drug Reactions	Aeroallergens
Contact Hypersensitivity (Patch testing)	Latex Allergy
Biology of the Eosinophil/Mast	Bone Marrow Transplant/GVHD
Cell/Basophil	Stinging Insect Allergy
Asthma	White blood cell defects
Vaccines (Principles and Reactions)	Others

The Division maintains a small specialized library of journals, textbooks and article files relevant to Allergy/Immunology for the Fellow's reference. Each fellow has their own computer work station which has internet access. This makes available a wide variety of internet based sources of medical information. Children's Hospital maintains a General Pediatrics library and computer work stations available for the use of the Fellows. Reprints of articles not available on line can be obtained by the Children's Hospital librarian. LSUHSC also maintains a vast library at the main campus which is also accessible to all fellows- both electronically and physically.

Several texts and resources are available for self study including Middleton, Leung and Patterson. It is recommended that Fellows purchase a major A/I Text for home reference. Fellows should also purchase the most recent edition of Abbas (Clinical and Laboratory Immunology) for preparation for Friday immunology conference.

Additionally, the practice parameters set forth by the ACAAI and AAAAI are necessary for up to date understanding of the major disease processes encountered by fellows. They are available on the respective websites of these national organizations.

The core reading list (recommended by the ABAI and training programs nationwide) is also required to be reviewed by fellows. It is available for download online at:

**[www.aaaai.org/professionals/careers/trainingprograms/reading\\_list.stm](http://www.aaaai.org/professionals/careers/trainingprograms/reading_list.stm)**

## 2. Research and Scholarly Activities

The sharing of medical knowledge and contributing new knowledge is an important role for the academic allergist/immunologist. A required part of the Fellowship is to develop skills and experience in teaching and research.

- a) Research Training – The Fellow is mentored in developing and executing a research project by a faculty member. Initially the Fellow may participate in on-going research activities of the division. With experience, the Fellow can develop a project for which he/she has primary responsibility for the design, IRB approval, execution, data collection and analysis and presentation of results. All residents participating in clinical research within LSUHSC are required to complete CITI Training modules on the LSUHSC Website. These provide guidance and sessions devoted to responsibilities of human subjects' research, hypothesis development, methods development, collection and storage of data, statistical analysis of data, and data presentation. (Sessions on animal use will be provided if related to the research). The fellows participate in selected nationally organized meetings to enhance research by allergist/immunologists at the fellowship level.
- b) Teaching – The Fellow will engage in preparation and presentation of clinical cases, journal articles and research topics to colleagues in the division during conferences. These presentations will be critiqued by faculty mentors. A series of teaching workshops is arranged to hone these skills. The Fellow will also participate in informal

teaching and guidance of General Pediatrics, Medicine, and Med-Peds residents on the ward, doing electives in the division and in patient clinics.

## V. **Responsibilities of the Fellow**

Fellows have the following responsibilities in the Division.

1. Line of Supervision for Fellows – The Fellowship Program Director has overall responsibility for the Fellow’s activities and supervision of his/her performance. The Fellow must keep the Program Director aware and up to date on duty hours, research progress, on-service and clinic scheduling, requests for vacation and leave, problems arising with staff, Faculty Attendings, etc.

For patient care, the on-service Attending will have oversight, indirect, and/or direct supervision of the on-service Fellow for inpatient and consult management issues. The attending also provides oversight of the Fellow’s fielding of patient-related telephone calls.

### 2. Clinical Service

#### a. Inpatient

- 1) Fellows round daily on inpatients at Children’s Hospital, Ochsner Medical Center-Kenner, or MCLANO and write progress notes and oversee activities of residents sharing in the care of the patients. They will field questions regarding care of the patient from resident and nursing staff. They will report back in a timely fashion to the Attending on the progress of the patient and any changes in management that might occur between formal rounds. If the Fellow can not be present at rounds, he/she must notify the Allergy/Immunology Attending immediately.
- 2) Fellow will be the first responder for inpatient consultations to the Allergy/Immunology service. The Fellow will make presentation to the Attending regarding the case and prepare written record of the case and recommendations. The Fellow will also make periodic reassessments of the patient’s progress.
- 3) Fellow will see weekly IVIg patients in the short-stay unit with accompanying Faculty. The Fellow will obtain interim history, document product use and dosing, and make necessary adjustments on medications or immunoglobulin therapy.
- 3) Fellows will be responsible for communicating changes in management plan to resident, nursing and support staff and making sure that orders are properly performed.
- 4) Fellows will maintain and update flowsheets on complicated patients.

5) With guidance of the faculty, the fellow assists in assigning status and diagnosis codes to daily activities needed for billing purposes.

6) On-Call Schedule

- a) The Fellow's on-service schedule is arrived at between Fellows in the Program, Attending Staff and Program Director. While on service, Fellows take home-call (beeper call from home). On weekends/holidays, the "on-service" Fellow will round on inpatients and meet to round on patients with the faculty on call. The on-service Fellow notifies the Attending on call of any problematic clinical calls they have received, and all calls from other physicians about patients in emergency room situations and any patients potentially requiring hospital admission.
- b) For patients admitted after hours with serious, complex life threatening conditions where the diagnosis and management requires emergency evaluation of the patient by a Allergist/Immunologist, the "on-service" Fellow is expected to return to the hospital and take a lead role in the assessment and care of the patient. "Home call" does not count towards the 80 hour work rule, however, on-call hours which require direct patient care time (such as ER consults) should be documented as such in New Innovations.

b. Outpatient

The Fellow is required to participate in approximately five (5) half-day Allergy/Immunology clinics per week at Children's Hospital, LSU Multispecialty Clinics, MCLNO, and/or other clinics affiliated with the above. The arrangement of clinic schedules will allow the Fellow to have longitudinal management of patients over the course of the Fellowship Program with consistent supervision from the faculty. The Fellow is responsible for discussion of his/her patient with the clinic Attending at the time of the clinic visit as well as discuss the outcome of lab studies and changes in management that result from diagnostic studies. The Fellows are responsible for appropriate documentation of level of service provided to the patient and a diagnostic and management plan. The Fellow is responsible for communication of consultation on patients to the referring physician, which the supervising faculty correct and countersign.

Procedures: There is a departmental procedure manual that is available for review by the fellows and faculty alike. It is always subject to review and updating in order to maintain standard of care.

3. Research/Scholarly Activity

The Allergy/Immunology Fellows will actively participate in the research activities and scholarly life of the Division. Initially Fellows will be allowed to participate in ongoing projects in the division. However, the Fellow may also engage in a hypothesis-driven research project within the division for which they have primary responsibility. The

research project must have the approval of the Program Director. Involvement in research activity must result in the generation of a specific written “work product.” The division puts highest priority in preparation of a manuscript that would be suitable for submission in a peer-reviewed publication in which the resident plays a substantial role (first authorship). Extramural grant applications that include substantial preliminary data collected and analyzed by the Fellow and have been accepted for funding or favorably reviewed may also qualify. Other forms of scholarly work product are acceptable to document this component of the program (grand rounds presentations, abstract/poster presentations etc)

To assess the Fellow’s progress in research activity, a Scholarship Oversight Committee will be formed for the Fellow once a research project has been formulated. The Fellow will present their work in oral and written form periodically to their Scholarship Oversight Committee (SOC) and elsewhere. The SOC will meet and determine if the Fellow’s final work product meets the requirements of the Fellowship and so advise the Fellow and Program Director.

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#### 4. Teaching of Other Physicians and Health Professions

The Fellow is expected to participate in the teaching mission of the division. The Fellow will have close and frequent contact with medical students and residents and is expected to help them understand the diagnostic and management issues to allergy and immunology patient cases on the ward and in the clinic.

In addition, under supervision of the Faculty, the Fellow is required to prepare several formal lectures in PowerPoint format for Case Conference. Finally, Fellows are expected to prepare Journal Club presentations approximately once per month to discuss up-to-date literature and promote improvement in clinical practice. Fellows in their 2<sup>nd</sup> year also present cases at the Louisiana Society of Asthma Allergy and Immunology Meeting each June.

5. Conference Attendance

The Fellow is expected to attend and participate in all scheduled Allergy/Immunology divisional meetings, conferences, and didactic sessions unless excused in advance by the Program Director. Additionally, the fellow is expected to be prepared for any sessions which have pre-assigned reading materials.

6. Self- Learning

In addition to other modes of instruction provided for the Fellow by the Division, the Fellow is expected to pursue and read extensively regarding patients seen and evaluated.

7. Documentation of Activities

- a) The Fellow will maintain a log of all patients they see while on-service as well as in the outpatient setting, with relevant diagnoses and outcomes. This log will be maintained through the ACGME and will be available to Faculty and the Program Director at the time of formal performance evaluations.
- b) The Fellow should maintain a portfolio of their formal teaching presentation as well as a log of informal teaching sessions they may provide.
- c) The Fellow must keep a log of their activities on Residency Partner (Duty Hours). The ACGME website describes the process in detail, and this should be reviewed by the resident. If there are any questions regarding this procedure, the resident should ask either the TPD, Dr. Paris (director of fellowship education for the program, or contact ACGME directly).

**VI. Evaluation, Progress and Promotion**

The Fellow is expected to demonstrate progression in accumulation of skills and knowledge over the course of the Allergy/Immunology training program. The Fellow's progress is assessed both informally and formally by the Program Director and Faculty over the course of the program. Informal evaluation and feedback is provided to the Fellow on a day-to-day basis in response to the work of the Fellow by the Attending Faculty or by the Faculty supervising the Fellow's research, scholarly activity and teaching efforts. In addition, the Faculty formally evaluates the Fellow in writing and the Program Director meets with the Faculty to arrive at an overall assessment of the Fellow's performance. The Program Director also takes into account comments and suggestions by support staff and patients regarding the Fellow's performance and abilities. The Program Director will arrange a meeting with the Fellow to discuss the

consensus of the Faculty regarding the Fellow's progress and success in achieving program goals. The Program Director will also be use input from the SOC regarding progress in research/scholarly activities.

At the core of evaluating the Fellow's performance and progress in achieving the goals of the program the Faculty uses the rubric of the six general competencies: 1) patient care, 2) medical knowledge, 3) interpersonal and communication skills, 4) professionalism, 5) practice-based learning and improvement, and 6) systems-based practice. Table 1 outlines the expectations of progression in each competency area over the course of the two (2) years.

Successful progress each year will lead to promotion to the next year of fellowship training in the Program. After successful completion of two (2) years of program requirements, the Program Director will certify that the Fellow is competent and qualified to sit for the Board examination in Allergy and Immunology given by the American Board of Allergy and Immunology. The Fellow will receive an official certificate of program completion from LSUHSC.

Fellows having difficulty in achieving Program goals will be counseled by the Program Director and Faculty members. However, failure to improve performance after counseling sessions will lead to the Fellow being placed on probationary status (see institutional policies and procedures) by the Faculty. While on probation, if there is continued failure to progress, the Fellow's contract will not be renewed for the subsequent year/s of training. Under these circumstances the Fellow will receive both written and verbal advisement of this decision (see Institutional Policies and Procedures regarding Adverse Actions and Appeal).

### **Allergy/Immunology Fellowship Program Clinical Competency Committee Protocol**

**Purpose:** The Next Accreditation System will require standardized measurements of fellow performance through the milestone and entrustable professional activities (EPA). To facilitate achievement of this goal, the LSUHSC Fellowship Program for Allergy/Immunology will establish a Clinical Competency Committee (CCC). The purpose of the CCC will be to rate a fellow's clinical competency based on standardized, transparent criteria. The committee will review all fellow evaluations semi-annually and make recommendations to the program director relative to fellow progress, including promotion, remediation, and dismissal. The committee will also prepare and ensure accurate reporting of milestone evaluations of each fellow semi-annually to the ACGME.

The CCC will convene initially to expand members' knowledge of milestones and entrustable professional activities as well as to review current evaluation tools and revise as required to comply with milestone reporting.

In addition to Milestones/ EPAs, the committee will utilize current evaluation tools, especially the fellows' portfolios. Documents to be reviewed include 360<sup>0</sup> evaluations, completion of Core Curriculum lectures/modules, review of duty hours/ moonlighting, procedure logs, in-service scores, scholarly activity including research project (mentor, SOC members and meetings, project status) as well as academic presentations, grant applications, participation in QI/QA

project with review of goal and outcome. An individual learning plan will be reviewed as well as fellow review of program, and a competency based self assessment.

**Resident Enhancement and Corrective Action Plans:** As above, CCC members will review individual resident performances using the monthly evaluation form. If the resident is on target or ahead of projected performance, recommendations can be made to provide the resident with a guide to further enhance his or her development. Areas for improvement or resident deficiencies will result in a more involved and documented corrective action plan. If during the evaluation process a CCC member notes a resident falls under the “Critical Deficiencies” category of the milestones evaluation form or identifies characteristics that may threaten the health and well-being of patients or the resident, that member will immediately notify the Committee Chair and Program Director so that swift action can be taken to intervene and mitigate any harm. The events and course of action will also be shared with the committee members at the time of the quarterly meetings. Residents will otherwise be considered to have adequate progression based on the following scale:

- o PGY4: Rating of 2-4 (or greater) on the milestones evaluation form
- o PGY5: Rating of 4-6 (or greater) on the milestones evaluation form

Each resident’s progression will be noted during each CCC meeting. The final rating for each of the 22 ACGME milestones will be determined by the committee as a whole, with the majority vote (over 50%) determining the rating. If there is a tie, the Committee Chair will serve as the tie breaker. If failure to progress through the milestones, or if a separate resident issue is identified, a formal action plan will occur as follows:

- o The committee will determine a course of action for corrective action.
- o The plan will be written out with specific recommendations and a timeline for the resident to demonstrate progression. This will be kept with the Program Coordinator as part of the resident’s file.
- o The CCC member assigned to that resident will then share the action plan with the Committee Chair and Program Director for approval. Once approved, the plan will also be shared with the resident’s faculty advisor.
- o Working together the assigned faculty member and the CCC member will meet with the resident to review and enact the action plan. If the faculty member and CCC member assigned to the resident is the same individual, then one of the alternate CCC members assigned to that year will serve as the co-advisor for the action plan.

The resident’s progression will again be reassessed at the quarterly CCC meeting. If the resident continues to show failure of progression in the same area, the Committee Chair and Program Director will meet to determine the next step in corrective action.

**Members:** Given the small size of the program, the frequent and close faculty-fellow interaction, and the dedication of all AI faculty to medical education, all AI division members will participate in the CCC. As a group, they possess a reliable working knowledge of evaluation and assessment and many years experience in its application. The PD will appoint a

committee chair from among senior faculty and participate in committee meetings as a division member. The chair will be responsible for scheduling and directing meetings as well as preparing reports for submission to the PD. The committee chair will review fellows' files and present a summary of their evaluations and assessment of clinical skills. Committee members will provide additional information for clarification of fellow evaluations. The committee will collectively decide each fellow's milestone assessment as well as recommendation for promotion, remediation, and termination. Decisions will require a quorum of 4 committee members.

Program Coordinator's Role: We encourage the PC to attend committee meetings; PCs may also assist in gathering needed evaluation summaries and other data elements for the committees; PCs often also maintain documentation of committee meetings, including meeting minutes.

**Member Names:** Ken Paris, MD; Ricardo Sorensen, MD; Victoria Dimitriades, MD; Augusto Ochoa, MD; Luke Wall, MD; Lily Leiva, MD; Prem Kumar, MD; Sanjay Kamboj, MD

Meetings will be held twice a year (May/June and November/ December). Ad hoc meetings may be needed for any urgent intervention, assessments.

Evaluation of Program by Fellows – The Fellow is required to complete an anonymous written evaluation of the Program at least once a year and preferably twice a year. Faculty-suggested major changes in programming will first be discussed with the Fellow/s prior to implication.

If the Fellow wishes to make additional comments or suggestions regarding the program confidentially, they may arrange a meeting with Kelly Allerton, the fellowship coordinator. The Fellow may also seek a meeting with Dr. Charles Hilton or Becky Odinet-Frey in the GME office of LSUHSC.

**Overview of the LSUHSC A/I Fellowship  
Allergy/Immunology Fellowship Training Program  
Kenneth Paris, M.D. Program Director  
Program 0202121070**

**Overall Goals and Objectives  
Allergy/Immunology Fellowship Training Program  
Dr. Kenneth Paris, Director  
Program 0202121070**

**ROTATIONS:**

The fellows in this program are required to participate in both Adult and Pediatric Allergy/Immunology training during the entire two-year period at the following sites:

- I. Children's Hospital
- II. Touro Hospital Rotation

- III. LSU Multi-specialty Clinics
- IV. Medical Center of Louisiana at New Orleans (aka LSU Interim Hospital, ILH, UH)
- V. Ochsner Medical Center-Kenner
- VI. Electives
  - 1. ENT
  - 2. Dermatology
- VII. Educational Component
- VIII. Research Component

## **I. CHILDREN'S HOSPITAL ROTATION**

Children's Hospital is a not-for-profit tertiary care center located in New Orleans. It is the major teaching hospital for The Department of Pediatrics at the Louisiana State University Health Sciences Center at New Orleans. Children's Hospital maintains outpatient satellite clinics in Metairie, Baton Rouge, and Lafayette, Louisiana.

The Children's Hospital Allergy/Immunology rotation consists of clinic sessions that occur on three to four one-half day blocks each week. Pulmonary function testing occurs primarily in the pulmonary laboratory at Children's Hospital.

### Faculty:

Dr. Kenneth Paris – Associate Professor of Pediatrics and Training Program Director

Dr. Ricardo Sorensen – Professor of Pediatrics and Chairman of the Department of Pediatrics

Dr. Augusto Ochoa – Professor of Pediatrics and Director of the Stanley Scott Cancer Center of the Louisiana State University Health Sciences Center at New Orleans.

Dr. Victoria Dimitriades – Assistant Professor of Pediatrics and Director of Fellowship Education

Dr. Luke Wall – Assistant Professor of Pediatrics

*Teaching:* Clinical teaching at the bedside is the responsibility of each attending physician. Second year fellows-in-training are also involved in the teaching of medical students, residents, and first year A/I fellows-in-training. First year fellows-in-training assume more teaching responsibilities as their fund of medical knowledge increases.

*Supervision:* Each clinic session is supervised by one or more on-site attending physicians from the LSU medical faculty.

*Formal Education:* Drs. Paris and Dimitriades are responsible organization and implementation of the A/I Core Curriculum Conferences. Reading requirements include the TPD Reading List, formal A/I texts (for example Middleton) and Abbas Clinical and Molecular Immunology.

## **GOALS**

By the end of the two-year training period, each fellow-in-training will demonstrate competence in the diagnosis and management of Immunodeficiencies, Hypersensitivity Disorders, Asthma, Autoimmune Disorders, Recurrent Infectious Disorders, and Chronic Inflammatory Disorders.

## **OBJECTIVES**

### **First Year Fellows-In-Training**

1. **Patient Care:** The fellows-in-training must:
  - a. Demonstrate the ability to elicit a detailed and appropriate history and physical examination upon both new and follow-up patients with Allergic-Immunologic disorders.
  - b. Demonstrate the ability to generate an appropriate differential diagnosis based upon key features of the chief complaint, medical history, and physical findings.
  - c. Demonstrate the ability to order and interpret appropriate and cost-effective laboratory studies.
  - d. Demonstrate the ability to manage Allergic/Immunologic disorders using pharmacologic agents (anti-inflammatory agents, immunosuppressive therapies, antibiotics, anti-histamines, etc.), allergen vaccines (allergy shots), intravenous gammaglobulin, monoclonal antibodies (anti-IgE, etc.), environmental modification therapies (allergen elimination therapies), and immunomodulatory therapies (probiotics, etc.).
  - e. Perform the following procedures:
    - i. Skin Testing – Puncture (prick), intradermal, interfering conditions or medications
    - ii. Patch Testing
    - iii. Pulmonary function tests  
Common tests
      - a. Peak expiratory flow rate (PEFR)
      - b. Spirometry
      - c. Forced expiratory flow (FEV1)
      - d. Forced vital capacity (FVC) and forced expiratory flow in one second ratio (FEV1/FVC)
      - e. Diagram of lung capacity/flow volume loop
      - f. Typical findings in various conditions
      - g. Exercise challenge and methacholine challenge
    - iv. Nasal smears for cytology
    - v. Skin biopsies
    - vi. Preparation of allergen vaccines
    - vii. Administration of allergen vaccines
    - viii. Oral and intravenous drug desensitization in the ICU setting
    - ix. Oral food challenges
      - x. Preparation of written Food Elimination Diet
      - xi. Preparation of written Asthma Action Plans
      - xii. Preparation of written Food Allergy Action Plans
    - xiii. Management of Acute Anaphylaxis Case Scenarios in the Simulation Laboratory (in development)
    - xiv. In Vitro testing – IgE assay techniques, methods of reporting, interpretation, sensitivity, specificity
    - xv. Aspirin challenges

## Outcomes

- a. Record Review with questionnaires will be used to assess progressive acquisition of patient care objectives
  - b. Performance on case-scenarios in the Simulation Laboratory will also be used to assess acquisition of anaphylaxis and status asthmaticus specific patient care objectives (currently in development)
  - c. 360° Evaluation
2. **Medical Knowledge:** The fellows-in-training must demonstrate knowledge of clinical hypersensitivity disorders and clinical immunology as noted from the following outline from the AAAAI Medical Knowledge Self-Assessment Program.
- a. The fellows-in-training must become competent in the management of the following clinical disorders at the end of their clinical training.

### Asthma

#### Natural History of Asthma

Asthma in children

Asthma in adults and the elderly

Cost of asthma

#### Pathogenesis of Asthma

Inflammation in asthma: Immunopathologic components

Oxidative stress in asthma

Leukotrienes in asthma pathogenesis

Airway remodeling as an outcome of chronic inflammation

Viral pathogens in asthma pathogenesis

Asthma and the nervous system

Mucus secretion

#### Asthma and Molecular Genetics

Clinical evaluation: Making the diagnosis

Medical history

Physical examination

Pulmonary function tests

Differential diagnosis

Long-term management of asthma

Evaluation and management of acute asthma

Asthma and pregnancy

#### Pharmacotherapy and Immunotherapy for Asthma

Specific immunotherapy or immunomodulation for asthma

### Occupational Asthma

Definition

Causes, prevalence, and incidence

Risk factors

Natural history

Pathogenesis

Diagnostic evaluation

Differential diagnosis

Management

### **Other Pulmonary Disorders**

#### Cystic Fibrosis

Diagnosis

Therapy

#### Hypersensitivity Pneumonitis

Definition and Prevalence

#### Alpha-1-Antitrypsin Deficiency

Genetics and physiology

Molecular biology

Clinical characteristics

Management

#### Nicotine Dependence and Tobacco Smoke

Interstitial Lung Diseases

#### Chronic Obstructive Pulmonary Disease

Diagnosis

Assessment of severity

Pathogenesis and pathology

Management of COPD

#### Eosinophilic Lung Diseases

Pulmonary infiltrates with Eosinophilia Syndromes

### **Allergy and Clinical Immunology**

#### Upper Airway Disease

Rhinitis

The paranasal sinuses

Otitis media

Laryngeal disorders

Other upper airway disorders

Clinical evaluation of the upper airway

#### Natural Rubber Latex Allergy

### Environmental Allergens

Outdoor environment  
Indoor environment  
Environmental controls  
Pollution

### Immune-Mediated Dermatologic Disorders

Atopic dermatitis  
Contact dermatitis  
Urticaria and angioedema  
Autoimmune blistering diseases

### Mastocytosis and Eosinophil Disorders

Mastocytosis  
Hypereosinophilic Syndromes  
Eosinophilia-Myalgia Syndrome

### Allergic Eye Disease

Immunobiology of the Conjunctiva  
Seasonal and perennial allergic rhinoconjunctivitis  
Vernal keratoconjunctivitis  
Giant papillary conjunctivitis  
Management principles of allergic eye disease

### Anaphylaxis

Pathogenesis and differential diagnosis  
Anaphylaxis mediators and markers  
Causes and risks of anaphylaxis  
Prevention and treatment of anaphylaxis

### Stinging Insect Hypersensitivity

Hymenoptera

### Food Allergy

Definition and prevalence  
Pathophysiology of food hypersensitivity  
Food allergens  
IgE-mediated food allergies  
Non-IgE-mediated food hypersensitivity  
Chronic disease caused by IgE- and non-IgE-mediated food hypersensitivity  
Food dyes and additives  
Diagnosis of food hypersensitivity  
Treatment of food hypersensitivity  
Natural history  
Prevention of food hypersensitivity

## Drug Allergy

Incidence

Definition

Classification of immune-mediated hypersensitivity reactions

Drug metabolism and adverse reactions

Risk factors for adverse drug reactions

Diagnosis of hypersensitivity reactions

Beta-lactam hypersensitivity

Sulfonamides

Management of hypersensitivity reactions

Miscellaneous adverse drug reactions

## Inflammatory Arthritis and Autoimmune Disease

Rheumatoid arthritis

The spondyloarthropathies

Reiter's Syndrome/reactive arthritis

Psoriatic arthritis

Enteropathic arthritis

Juvenile chronic arthritis

Lyme disease

Autoantibody-mediated diseases

Other autoimmune diseases

Vasculitis

## Alternative and Complementary Therapy for Allergic Disease

Alternative therapies in asthma

Adverse reactions and drug interactions with herbal medicine

Resources for information on herbal supplements

Reporting adverse events on herbal supplements

Medical malpractice implications of alternative medicine

Guidelines for treating patients using alternative medicine

## **Immune-Based Therapies**

### Immunotherapy for Allergic Disease

Mechanisms

### Allergen Vaccines

Clinical efficacy

Dose dependence of immunotherapy

Allergen selection

Long-term efficacy of immunotherapy

Duration of immunotherapy

Risk factors for immunotherapy

Modified extracts

Dosage schedules

Maintenance immunotherapy

Other forms of immunotherapy

Future immunotherapy strategies



### Immunomodulation

Immunosuppressive agents  
Immunostimulatory agents  
Immunomodulatory agents

### Immunization

Types of vaccines and immunologic strategies  
Adverse reactions  
Principles for vaccinating immunosuppressed persons  
Vaccine safety surveillance and risk communication  
Vaccine adverse events reporting system  
Challenges for the future: bioterrorism and Beyond

### Immunodeficiencies

#### Primary Immunodeficiencies

Clinical features of primary immunodeficiency diseases  
Infections in patients with immunodeficiency diseases  
Malignancy in patients with immunodeficiency diseases  
Immunodeficiency diseases with primary defect in humoral immunity  
Combined immunodeficiency diseases with primary defect in cellular immunity  
Disorders of complement  
Disorders of phagocytes  
Immunodeficiency associated with other disorders  
Therapy for the primary immunodeficiency diseases

#### Human Immunodeficiency Virus Infection and the Acquired Immune Deficiency Syndrome

Pathophysiology  
Natural history of HIV infection  
Risk groups and behavior  
HIV testing  
Staging  
Management

### Diagnostic Laboratory Immunology

#### Humoral Assessment

Measurement of total immunoglobulin levels  
Immunoglobulin characterization  
Cellular assessment  
Neutrophil studies  
Complement studies  
Immune complex assays

#### Molecular Methods

DNA genomics  
RNS genomics  
Monoclonal antibodies

Mediator Assays

Tissue typing

- b. Obtain data from the literature, use of on-line resources and provide literature documentation of treatment plans.
- c. Demonstrate competence in the evaluation of flow cytometric lymphocyte subpopulation profiles, spirometry results, flow-volume loop results, and skin and patch testing results in the management of patients.
- d. Complete the in-service American Board of Allergy and Immunology Examination.
- e. Obtain a passing score on the Allergy/Immunology Board examination.

**Outcomes**

American Board of Allergy and Immunology Annual In-Service Examination – Performance on the In-Service Examination will serve as a guide in evaluating the successes and areas in need of improvement for the Medical Knowledge component of our program.

American Board of Allergy and Immunology Certifying Examination.—Performance on the Certifying examination will serve as an evaluation tool for our training program.

Periodic A/I Divisional Examinations—Performance on periodic examinations (Pre/Post Test or other quizzes) administered by the A/I Division based upon weekly literature review sessions will be used as tools to guide the success of our educational program.

**3. Interpersonal and Communication Skills** – At the completion of fellowship training, the fellow-in-training should demonstrate:

- a. Effective communication skills with other health care professionals in the office and hospital settings.
- b. The ability to obtain proper informed consent, including risks.

**Outcomes**

- a. Record Review – will establish whether appropriate communication is taking place between the fellow-in-training and other physicians.
- b. 360° Evaluation – will be used to assess other communication skills of the training fellow.
- c. Presentation Evaluation – will be used to give feedback in assessment of communication skills.

**4. Professionalism** – During the rotation, the resident must show:

- a) Punctuality, professional demeanor, and reliable performance of his duties.
- b) Sensitivity to the special needs of patients, respect for their privacy and confidentiality of their medical information.
- c) Appropriate dress and appearance.
- d) Appropriate response to calls from the emergency room as well as patient exchanges.

**Outcomes** – The following will be used to assess professionalism:

- a. Patient Surveys
- b. 360° Evaluation

**5. Practice Based Learning and Improvement** – During the rotation, the fellows-in-training should:

- a. Demonstrate that he/she can analyze the pre-stem cell transplantation condition and the post-stem cell transplantation condition results in patient immune reconstitution panels.
- b. Demonstrate that he/she can analyze the pre-allergen immunotherapy clinical state and the post-allergen immunotherapy clinical state in allergy patients.
- c. Show familiarity with the literature and apply information from literature to the diagnosis and management of clinical cases.
- d. Use of Serial Immune Reconstitutions panels to document the patient's post transplant course.

### **Outcomes**

Records Review to determine if flow charts contain serially recorded variables that truly reflect important factors that need to be followed in certain post-intervention clinical disorders.

### **6. Systems Based Practice** – During the rotation, the resident should:

- a. Act as an advocate for his patients
- b. Utilize levels of care (acute inpatient care, outpatients, short-stay IVIG administration, home health and durable equipment)
- c. Understand some of rudiments of practice management, including billing, ICD-9 codes and CPT codes
- d. Understand safety issues in the hospital
  - i. The resident can use the information technology system
  - ii. The resident can write legible orders and medications.

### **Outcomes**

- a. Chart Reviews
- b. Patient Surveys

## **Second Year Fellows-In-Training:**

### **1. Patient Care:** The fellows-in-training must:

- a. Supervise 1<sup>st</sup> year fellows as they elicit a comprehensive history and physical examination upon both new and follow-up patients with Allergic-Immunologic disorders.
- b. Supervise 1<sup>st</sup> year fellows differential diagnosis based upon key features of the chief complaint, medical history, and physical findings.
- c. Supervise residents and fellows as they order appropriate and cost-effective laboratory studies.
- d. Demonstrate advanced ability to manage Allergic/Immunologic disorders using pharmacologic agents (anti-inflammatory agents, immunosuppressive therapies, antibiotics, anti-histamines, etc.), allergen vaccines (allergy shots), intravenous gammaglobulin, monoclonal antibodies (anti-IgE, etc.), environmental modification therapies (allergen elimination therapies), and immunomodulatory therapies (probiotics, etc.).
- e. Perform the following procedures with precision and while under minimal supervision:
  - i. Skin Testing – Puncture (prick), intradermal, interfering conditions or medications
  - ii. Patch Testing

- iii. Pulmonary function tests
  - Common tests
    - a. Peak expiratory flow rate (PEFR)
    - b. Spirometry
    - c. Forced expiratory flow (FEV1)
    - d. Forced vital capacity (FVC) and forced expiratory flow in one second ratio (FEV1/FVC)
    - e. Diagram of lung capacity/flow volume loop
    - f. Typical findings in various conditions
    - g. Exercise challenge and methacholine challenge
  - iv. Nasal smears for cytology
  - v. Skin biopsies
  - vi. Preparation of allergen vaccines
  - vii. Administration of allergen vaccines
  - viii. Oral and intravenous drug desensitization in the ICU setting
  - ix. Oral food challenges
    - x. Preparation of written Food Elimination Diet
    - xi. Preparation of written Asthma Action Plans
    - xii. Preparation of written Food Allergy Action Plans
  - xiii. Management of Acute Anaphylaxis Case Scenarios in the Simulation Laboratory (in development)
  - xiv. In Vitro testing – IgE assay techniques, methods of reporting, interpretation, sensitivity, specificity
  - xv. Aspirin challenges

### **Outcomes**

- a. Record Review with questionnaires will be used to assess progressive acquisition of patient care objectives
  - b. Performance on case-scenarios in the Simulation Laboratory will also be used to assess acquisition of anaphylaxis and status asthmaticus specific patient care objectives (currently in development)
  - c. 360° Evaluation
2. **Medical Knowledge:** The 2<sup>nd</sup> year fellows-in-training must demonstrate superior knowledge of clinical hypersensitivity disorders and clinical immunology as noted from the following outline from the AAAAI Medical Knowledge Self-Assessment Program. See Medical Knowledge above.

### **Outcomes**

American Board of Allergy and Immunology Annual In-Service Examination – Performance on the In-Service Examination will serve as a guide in evaluating the successes and areas in need of improvement for the Medical Knowledge component of our program. 2<sup>nd</sup> year fellow are expected to demonstrate improvement in overall score on this examination.

American Board of Allergy and Immunology Certifying Examination.—Performance on the Certifying examination will serve as an evaluation tool for our training program.

Periodic A/I Divisional Examinations—Performance on periodic examinations (Pre/Post Test or other quizzes) administered by the A/I Division based upon weekly literature review sessions will be used as tools to guide the success of our educational program.

3. **Interpersonal and Communication Skills** – In the 2<sup>nd</sup> year of fellowship training, the fellow-in-

training should demonstrate:

- a. Exceptional communication skills with other health care professionals in the office and hospital settings.
- b. The ability to obtain proper informed consent, including risks.
- c. Give effective feedback to 1<sup>st</sup> year fellows regarding their communication skills.

**Outcomes**

- a. Record Review – will establish whether appropriate communication is taking place between the fellow-in-training and other physicians.
- b. 360° Evaluation – will be used to assess other communication skills of the training fellow.
- c. Presentation Evaluation – will be used to give feedback in assessment of communication skills.

**4. Professionalism** – During the rotation, the 2<sup>nd</sup> year resident must show:

- a) Punctuality, professional demeanor, and reliable performance of his duties.
- b) Mentorship to junior fellows regarding professionalism.

**Outcomes** – The following will be used to assess professionalism:

- a. Patient Surveys
- b. 360° Evaluation

**5. Practice Based Learning and Improvement** – During the rotation, the fellows-in-training should demonstrate a supervisory role in:

- a. Analyzing the pre-stem cell transplantation condition and the post-stem cell transplantation condition results in patient immune reconstitution panels.
- b. Analyzing analyze the pre-allergen immunotherapy clinical state and the post-allergen immunotherapy clinical state in allergy patients.
- c. Show familiarity with the literature and apply information from literature to the diagnosis and management of clinical cases.
- d. Use of Serial Immune Reconstitutions panels to document the patient’s post transplant course.

**Outcomes**

Records Review to determine if flow charts contain serially recorded variables that truly reflect important factors that need to be followed in certain post-intervention clinical disorders.

**6. Systems Based Practice** – During the rotation, the resident should:

- a. Be familiar with the systems based practices utilized within the department such that minimal supervision by the faculty is necessary.
  - i. The resident can use the information technology system
  - ii. The resident can write legible orders and medications.

**Outcomes**

- a. Chart Reviews
- b. Patient Surveys

The second year fellows-in-training Goals and Objectives and Outcomes are similar to year one except:

1. The research project is initiated during the first year and completed during the second year.
2. Electives are preferably taken during the second year.
3. Second year fellows-in-training are expected to be more involved in the teaching of medical students, residents, and first year fellows-in-training.

## **II. TOURO HOSPITAL ROTATION (adult training site) – First and second year rotations are identical at this site**

The Touro Hospital rotation is with Dr. Prem Kumar for the LSUHSC Department of Medicine who is responsible for conducting Adult Allergy/Immunology clinics and for providing inpatient consult services. Fellows-in-training participate in the care of patients in the emergency room, and in the hospital for inpatient consultations under the supervision of full-time faculty.

Touro Hospital is a well-equipped private acute care community hospital located in the City of New Orleans and affiliated with the Medical School. Touro Hospital is located 2.8 miles from Children's Hospital (the main training location of the fellowship and the location of the academic/didactic activities of the fellowship).

Faculty Responsibilities: The full-time faculty is responsible for bedside teaching, supervision of the fellows as well as formal education.

### Faculty:

Dr. Prem Kumar – Faculty of the Allergy/Immunology Fellowship Training Program, Professor, Section of Allergy/Clinical Immunology, LSUHSC Department of Medicine

Dr. Kenneth Paris – Program Director

## **GOALS**

The goal of this program is to prepare eligible physicians so that at the time of graduation they are competent to practice the subspecialty of Allergy, Asthma and Immunology as specialists in the 21<sup>st</sup> Century. That goal is accomplished by arming them with up-to-date knowledge, training, and experience, by verifying competencies necessary to practice the subspecialty, and by meeting the requirements set forth by ACGME.

### **First Year Fellows in Training:**

## **OBJECTIVES**

1. **Patient Care:** The fellows-in-training must:
  - a. Demonstrate the ability to obtain a detailed history and perform a detailed physical examination.

- b. Be able to synthesize the facts in the history and physical examination to arrive at a differential diagnosis.
- c. Be able to order or perform appropriate procedures necessary to elicit a correct diagnosis or help with the management of the patient.
- d. Consider the safety and cost effectiveness of procedures at all times.
- e. Formulate management plans including, but not limited to, the management of pharmaceutical agents.
- f. The faculty pays specific attention to adverse drug reactions, drug interactions, polypharmacy and other medical errors that might compromise the health of the patient.
- g. Understand concomitant adult medical disorders and their treatment which may interfere with the management of allergic disorders (i.e. beta blocker therapy and ACE inhibitors).
- h. Perform and interpret the following procedures:
  - i. patch testing for allergy contact dermatitis, including cosmetic hypersensitivity
  - ii. perform and interpret spirometry
  - iii. understand, perform, and interpret methacholine challenges
  - iv. understand, perform, and interpret aspirin challenges
  - v. demonstrate IgE-mediated hypersensitivity by performing skin prick test and intradermal test
  - vi. selection of appropriate patients, identifying clinically relevant allergens for preparation of allergy vaccines and the administration of allergen vaccinations.

### **Outcomes**

- a. Global Rating of live or recorded performance – observation of skin testing, patch testing, and spirometry.
- b. 360° Evaluation

### **2. Medical Knowledge:** The fellows-in-training must:

- a. Demonstrate basic knowledge of hypersensitivity and immunodeficiency disorders in adult patients.
- b. Have the ability to obtain data from the literature, use of on-line resources and provide literature documentation of treatment plans.

### **Outcomes**

- Written Examination – Performance on the In-Service Examination will serve as a guide in evaluating the success of the Medical Knowledge component of our program.

### **3. Practice Based Learning and Improvement:** During the rotation, the fellow is expected to:

- a. Perform Med-Line searches pertinent to the patient seen in clinic in order to update and enhance their knowledge.
- b. Identify complications and formulate a plan to address them and prevent them in the future.
- c. Demonstrate that he/she can compare the pre-immunotherapy conditions and post-immunotherapy results in a critical manner.

### **Outcomes**

- Record Review – Documentation through the medical record of complications, prevention and treatment methods, and flow sheet construction that follows clinical outcomes before and after immunotherapy.

### **4. Interpersonal and Communications Skills:** At the completion of the rotation, the fellow should demonstrate:

- a. Effective communication skills with other health care professionals in the office and hospital settings.
- b. Be able to obtain proper informed consent, including risks.

### **Outcomes**

- a. 360° Evaluation
- b. Record Review

### **5. Professionalism:** During the rotation, the fellow must show:

- a. Punctuality, professional demeanor, and reliable performance of his duties.
- b. Sensitivity to the special needs of patients, respect for their privacy and confidentiality of their medical information.
- c. Appropriate dress and appearance.

- d. Appropriate response to calls from the emergency room as well as patient exchanges.

### **Outcomes**

- 360° Evaluation

### **6. Systems-Based Practice:** During the rotation, the fellow should:

- a. Act as an advocate for his patients
- b. Utilize levels of care (acute care, outpatient, long-term acute care, nursing homes, home health care and durable equipment).
- c. Understand some of the rudiments of practice management, including billing, ICD-9 codes and CPT codes
- d. Understand safety issues in the hospital
  - i. The fellow is able to use the Information Technology system
  - ii. The fellow is able to write legible orders and medications.

### **Outcomes**

- Patient Surveys

## **Second Year Fellows in Training:**

### **OBJECTIVES**

#### **1. Patient Care:** The fellows-in-training must:

- a. Supervise residents and 1<sup>st</sup> year fellows as they obtain a detailed history and perform a detailed physical examination.
- b. Be able to synthesize the facts in the history and physical examination to arrive at a final diagnosis.
- c. Be able to supervise residents and fellows in the appropriate procedures necessary to elicit a correct diagnosis or help with the management of the patient.
- d. Consider the safety and cost effectiveness of procedures at all times.
- e. Implement management plans with minimal supervision including, but not limited to, the management of pharmaceutical agents.
- f. The faculty pays specific attention to adverse drug reactions, drug interactions, polypharmacy and other medical errors that might compromise the health of the patient. Second year fellows are expected to identify these errors as well.
- g. Understand concomitant adult medical disorders and their treatment which may interfere with the management of allergic disorders (i.e. beta blocker therapy and ACE inhibitors), and proactively adjust treatment plans accordingly.
- h. Perform and interpret the following procedures with expertise and with minimal supervision:
  - i. patch testing for allergy contact dermatitis, including cosmetic hypersensitivity
  - ii. perform and interpret spirometry
  - iii. understand, perform, and interpret methacholine challenges
  - iv. understand, perform, and interpret aspirin challenges

- v. demonstrate IgE-mediated hypersensitivity by performing skin prick test and intradermal test
- vi. selection of appropriate patients, identifying clinically relevant allergens for preparation of allergy vaccines and the administration of allergen vaccinations.

### **Outcomes**

- a. Global Rating of live or recorded performance – observation of skin testing, patch testing, and spirometry.
- b. 360° Evaluation

## **2. Medical Knowledge:** (See Medical Knowledge above)

The fellows-in-training must:

- a. Disseminate basic knowledge of hypersensitivity and immunodeficiency disorders in adult patients to junior trainees such as residents and fellows.
- b. Have the ability to obtain data from the literature, use of on-line resources and provide literature documentation of treatment plans.

### **Outcomes**

- Written Examination – Improved performance on the In-Service Examination will serve as a guide in evaluating the success of the Medical Knowledge component of our program.

## **3. Practice Based Learning and Improvement:** During the rotation, the fellow is expected to:

- a. Perform Med-Line searches pertinent to the patient seen in clinic in order to update and enhance their knowledge.
- b. Identify complications and formulate a plan to address them and prevent them in the future.
- c. Demonstrate that he/she can compare the pre-immunotherapy conditions and post-immunotherapy results in a critical manner.

### **Outcomes**

- Record Review – Documentation through the medical record of complications, prevention and treatment methods, and flow sheet construction that follows clinical outcomes before and after immunotherapy.

## **4. Interpersonal and Communications Skills:** At the completion of the rotation, the fellow should demonstrate:

- a. Effective communication skills with other health care professionals in the office and hospital settings.
- b. Be able to obtain proper informed consent, including risks.

### **Outcomes**

- a. 360° Evaluation

b. Record Review

**5. Professionalism:** During the rotation, the fellow must show:

- a. Punctuality, professional demeanor, and reliable performance of his duties.
- b. Sensitivity to the special needs of patients, respect for their privacy and confidentiality of their medical information.
- c. Appropriate dress and appearance.
- d. Appropriate response to calls from the emergency room as well as patient exchanges.

**Outcomes**

-- 360° Evaluation

**6. Systems-Based Practice:** During the rotation, the fellow should:

- a. Act as an advocate for his patients and mentor junior trainees in this endeavor.
- b. Utilize levels of care (acute care, outpatient, long-term acute care, nursing homes, home health care and durable equipment).
- c. Be proficient in practice management, including billing, ICD-9 codes and CPT codes.
- d. Understand safety issues in the hospital
  - i. The fellow is able to use the Information Technology system
  - ii. The fellow is able to write legible orders and medications.

**Outcomes**

-- Patient Surveys

**III. LSU Multi-Specialty Clinics (adult training site) –**

The LSU Multi-specialty Clinics are located on the St. Charles Avenue LSU-First Campus in New Orleans. Dr. Prem Kumar of the LSUHSC Department of Medicine is responsible for supervising the Adult Allergy/Immunology clinics at this site. This site provides outpatient only allergy and immunology services.

Faculty Responsibilities: Dr. Kumar is responsible for bedside teaching, patient management, and supervision of A&I resident training.

Faculty:

Dr. Prem Kumar – Faculty, Allergy/Immunology Fellowship Training Program, Professor, Section of Allergy/Clinical Immunology, LSUHSC Department of Medicine

**GOALS**

The goals of this rotation are to prepare A&I residents to demonstrate competence in the diagnosis and management of Hypersensitivity disorders, Immunologic disorders, and Acute and Chronic Inflammatory Disorders.

**First Year Fellows in Training:**  
**OBJECTIVES**

1. **Patient Care:** The fellows-in-training must:
  - a. Demonstrate the ability to obtain a detailed history and perform a detailed physical examination.
  - b. Be able to synthesize the facts in the history and physical examination to arrive at a differential diagnosis.
  - c. Be able to order or perform appropriate procedures necessary to elicit a correct diagnosis or help with the management of the patient.
  - d. Consider the safety and cost effectiveness of procedures at all times.
  - e. Formulate management plans including, but not limited to, the utilization of pharmaceutical agents, environmental modifications, and immunotherapy.
  - f. Understand concomitant adult medical disorders and their treatment which may interfere with the management of allergic disorders (i.e. beta blocker therapy and ACE inhibitors).
  - g. Perform and interpret the following procedures:
    - i. patch testing for allergic contact dermatitis, including cosmetic hypersensitivity
    - ii. perform and interpret spirometry
    - iii. understand and interpret methacholine challenges
    - iv. understand, perform, and interpret aspirin challenges
    - v. demonstrate IgE-mediated hypersensitivity by performing skin prick test and intradermal test
    - vi. selection of appropriate patients, identifying clinically relevant allergens for preparation of allergy vaccines and the administration of allergen vaccinations.

### **Outcomes**

- a. Global Rating of live or recorded performance – observation of skin testing, patch testing, and spirometry.
- b. 360° Evaluation

### **2. Medical Knowledge:** The fellows-in-training must:

- a. Demonstrate basic knowledge of hypersensitivity, autoimmune, acute and chronic inflammatory, and immunodeficiency disorders in adult patients.
- b. Have the ability to obtain data from the literature, use of on-line resources and provide literature documentation of treatment plans.

### **Outcomes**

- Written Examination – Performance on the In-Service Examination will serve as a guide in evaluating the success of the Medical Knowledge component of our program.
- Periodic A/I Divisional Examinations—Performance on periodic examinations administered by the A/I Division based upon weekly literature review sessions will be used as tools to guide the success of our educational program.

### **3. Practice Based Learning and Improvement:** During the rotation, the fellow is expected to:

- a. Perform PubMed and other internet based searches pertinent to the patients seen in clinic in order to update and enhance their knowledge.
- b. Identify complications and formulate a plan to address them and prevent them in the future.

### **Outcomes**

- Record Review – Asthma and Allergic Rhinitis specific questionnaires will be used to document thoroughness in the evaluation and management of these disorders.

### **4. Interpersonal and Communications Skills:** At the completion of the rotation, the fellow should demonstrate:

- a. Effective communication skills with other health care professionals in the office and hospital settings.
- b. Be able to obtain proper informed consent, including risks.

### **Outcomes**

- a. 360° Evaluation
- b. Record Review
- c. Review of letters to referring physicians

### **5. Professionalism:** During the rotation, the fellow must show:

- a. Punctuality, professional demeanor, and reliable performance of his duties.

- b. Sensitivity to the special needs of patients, respect for their privacy and confidentiality of their medical information.
- c. Appropriate dress and appearance.
- d. Appropriate response to calls from the emergency room as well as patient exchanges.

**Outcomes**

-- 360° Evaluation

**6. Systems-Based Practice:** During the rotation, the fellow should:

- a. Act as an advocate for his patients
- b. Utilize levels of care (acute care, outpatient, long-term acute care, nursing homes, home health care and durable equipment).
- c. Understand some of the rudiments of practice management, including billing, ICD-9 codes and CPT codes
- d. Understand safety issues in the hospital
  - i. The fellow is able to use the Information Technology system
  - ii. The fellow is able to write legible orders and medications.

**Outcomes**

-- Patient Surveys

**Second Year Fellows in Training:**

**OBJECTIVES**

**1. Patient Care:** The fellows-in-training must:

- a. Supervise junior fellows and residents as they obtain a detailed history and perform a detailed physical examination.
- b. Be able to synthesize the facts in the history and physical examination and other data to arrive at a single final diagnosis.
- c. Perform appropriate procedures with ease and dexterity to elicit a correct diagnosis or help with the management of the patient.
- d. Consider the safety and cost effectiveness of procedures at all times.
- e. Supervise junior trainees in the development of management plans including, but not limited to, the utilization of pharmaceutical agents, environmental modifications, and immunotherapy.
- f. Understand concomitant adult medical disorders and their treatment which may interfere with the management of allergic disorders (i.e. beta blocker therapy and ACE inhibitors).
- g. Perform and interpret the following procedures with minimal supervision:
  - i. patch testing for allergic contact dermatitis, including cosmetic hypersensitivity
  - ii. perform and interpret spirometry
  - iii. understand and interpret methacholine challenges
  - iv. understand, perform, and interpret aspirin challenges
  - v. demonstrate IgE-mediated hypersensitivity by performing skin prick test and intradermal

- test
- vi. selection of appropriate patients, identifying clinically relevant allergens for preparation of allergy vaccines and the administration of allergen vaccinations.

### **Outcomes**

- a. Global Rating of live or recorded performance – observation of skin testing, patch testing, and spirometry.
- b. 360° Evaluation

### **2. Medical Knowledge:** The fellows-in-training must:

- a. Demonstrate basic knowledge of hypersensitivity, autoimmune, acute and chronic inflammatory, and immunodeficiency disorders in adult patients.
- b. Have the ability to obtain data from the literature, use of on-line resources and provide literature documentation of treatment plans.

### **Outcomes**

- Written Examination – Performance on the In-Service Examination will serve as a guide in evaluating the success of the Medical Knowledge component of our program.
- Periodic A/I Divisional Examinations—Performance on periodic examinations administered by the A/I Division based upon weekly literature review sessions will be used as tools to guide the success of our educational program.

### **3. Practice Based Learning and Improvement:** During the rotation, the fellow is expected to:

- a. Perform PubMed and other internet based searches pertinent to the patients seen in clinic in order to update and enhance their knowledge.
- b. Identify complications and formulate a plan to address them and prevent them in the future.

### **Outcomes**

- Record Review – Asthma and Allergic Rhinitis specific questionnaires will be used to document thoroughness in the evaluation and management of these disorders.

### **4. Interpersonal and Communications Skills:** At the completion of the rotation, the fellow should demonstrate:

- a. Effective communication skills with other health care professionals in the office and hospital settings.
- b. Be able to obtain proper informed consent, including risks.

### **Outcomes**

- a. 360° Evaluation
- b. Record Review
- c. Review of letters to referring physicians

**5. Professionalism:** During the rotation, the fellow must show:

- a. Punctuality, professional demeanor, and reliable performance of his duties.
- b. Sensitivity to the special needs of patients, respect for their privacy and confidentiality of their medical information.
- c. Appropriate dress and appearance.
- d. Appropriate response to calls from the emergency room as well as patient exchanges.

**Outcomes**

-- 360° Evaluation

**6. Systems-Based Practice:** During the rotation, the fellow should:

- a. Act as an advocate for his patients
- b. Utilize levels of care (acute care, outpatient, long-term acute care, nursing homes, home health care and durable equipment).
- c. Understand some of the rudiments of practice management, including billing, ICD-9 codes and CPT codes
- d. Understand safety issues in the hospital
  - i. The fellow is able to use the Information Technology system
  - ii. The fellow is able to write legible orders and medications.

**Outcomes**

-- Patient Surveys

**IV. MEDICAL CENTER OF LOUISIANA AT NEW ORLEANS (LSU Interim Hospital) (adult training site) – First and second year rotations are identical at this site**

The Medical Center of Louisiana at New Orleans consists of University Hospital and Outpatient Clinics. The Hospital and Clinics serve the New Orleans' inner-city and indigent populations.

The LSUHSC Allergy/Immunology rotation consists of one-half day clinic session each week.

**Faculty:**

Dr. Prem Kumar – Professor of Medicine and Faculty of the Adult Section of the LSUHSC Allergy Immunology Training Program

Dr. Sanjay Kamboj – Assistant Professor of Internal Medicine and Allergy and Immunology

*Teaching:* Clinical teaching at the bedside is the responsibility of each attending physician. Second year fellow-in-training are also have the responsibility of teaching medical students, residents, and first year fellows-in-training.

*Supervision:* Each clinic session is supervised by one or more on-site attending physicians from the LSU medical faculty.

*Formal Education:* Drs. Kumar and Kamboj are responsible for A&I resident education at the Medical

Center of Louisiana at New Orleans.

## **GOALS**

By the end of the two-year training period, each fellow-in-training will demonstrate competence in the diagnosis and management of immunodeficiencies, hypersensitivity disorders, asthma, autoimmune disorders, chronic or recurrent infectious disorders, and acute and chronic inflammatory disorders.

### **First Year Fellows in Training:**

## **OBJECTIVES**

### **1. Patient Care:** The A/I fellow will:

- a. Perform detailed history, physical examination, and select appropriate tests for patients presenting to the Emergency Room who require consultation from the A/I service
- b. Perform consultations for inpatients on internal medicine services as well as surgical services.
- c. Recognize complex pulmonary diseases in the adult population (e.g., ABPA, occupational asthma, hypereosinophilic syndrome, etc.)
- d. Recognize and treat autoimmune disorders in the adult population, such as Wegener's Granulomatosis, SLE, Churg-Strauss, etc.
- e. Perform appropriate medical evaluation for suspected IgE mediated and non-IgE mediated hypersensitivity diseases affecting adults including latex allergy, drug hypersensitivity, etc.
- f. Choose appropriate *in vitro* tests necessary for the diagnosis of the above disorders. In addition, interpretation of radiographic studies such a CXR, CT scans, MRIs, etc.
- g. Competently perform and interpret allergen patch testing and spirometry
- h. Competently perform drug/medication desensitization (e.g., aspirin or penicillin desensitization) and skin prick tests/intradermal testing

### **Outcomes:**

- a. 360° Evaluation
- b. Chart Reviews
- c. Direct Assessment

### **2. Medical Knowledge:** The A/I residents will:

- a. Demonstrate knowledge of hypersensitivity and Immunodeficiency disorders in adults
- b. Perform literature searches relevant to disease processes using on-line and computer-based sources as appropriate

### **Outcomes:**

- a. Written Examination performance on:
  - i. ABAI in-service examinations
  - ii. Periodic written examination administered by the Division
- b. Checklist Evaluation of case presentation and literature review

- 3. Practice Based Learning:** During the rotation, the fellows should gather exceptional cases encountered during the rotation for presentation at fellow's case presentation conference and prepare discussion of the evaluation and management of these cases by performing an extensive evidence-based literature review.

**Outcomes:**

- Checklist Evaluation of live presentation by Attending Physician

- 4. Interpersonal and Communication Skills:** The fellow will:

- a. Effectively communicate with other health care professionals and ancillary staff in an ER and inpatient hospital setting.
- b. Effectively communicate medical knowledge with patients and their families in a manner that is appropriate for their knowledge base.
- c. Have the ability to obtain appropriate informed consent for procedures and communicate risks/benefits appropriate for these procedures/tests.

**Outcomes:**

- a. 360° Evaluation

- 5. Professionalism:** The fellow will:

- a. Be punctual and reliable
- b. Be appropriately dressed
- c. Respond promptly to consultation pages and phone calls regarding patient care

**Outcomes:**

- a. Patient Surveys
- b. 360° Evaluation

- 6. Systems Based Practice: The fellow will:**

- a. Utilize levels of health care are appropriate for the degree of illness (acute care, inpatient care, long-term care, etc.)
- b. Use proper billing and coding practices
- c. Follow regulations such as JCHO, CLIA, etc.

**Outcomes:**

- a. Chart Review

**Second Year Fellows in Training:**

**OBJECTIVES**

- 1. Patient Care:** The A/I fellow will:

- a. Supervise detailed history, physical examination, and select appropriate tests for patients presenting to the Emergency Room who require consultation from the A/I service
- b. Perform consultations with minimal supervision for inpatients on internal medicine services as well as surgical services.
- c. Recognize complex pulmonary diseases in the adult population (e.g., ABPA, occupational asthma, hypereosinophilic syndrome, etc.)
- d. Recognize and treat autoimmune disorders in the adult population, such as Wegener's Granulomatosis, SLE, Churg-Strauss, etc.
- e. Supervise junior fellows and residents in the appropriate medical evaluation for suspected IgE mediated and non-IgE mediated hypersensitivity diseases affecting adults including latex allergy, drug hypersensitivity, etc.
- f. Order and accurately interpret appropriate *in vitro* tests necessary for the diagnosis of the above disorders. In addition, interpretation of radiographic studies such a CXR, CT scans, MRIs, etc.
- g. Competently perform and interpret allergen patch testing and spirometry
- h. Perform drug/medication desensitization with minimal supervision (e.g., penicillin desensitization) and skin prick tests/intradermal testing.

**Outcomes:**

- a. 360° Evaluation
- b. Chart Reviews
- c. Direct Assessment

**2. Medical Knowledge:** The A/I residents will:

- a. Demonstrate knowledge of hypersensitivity and Immunodeficiency disorders in adults
- b. Perform literature searches relevant to disease processes using on-line and computer-based sources as appropriate

**Outcomes:**

- a. Written Examination performance on:
  - i. ABAI in-service examinations
  - ii. Periodic written examination administered by the Division
- b. Checklist Evaluation of case presentation and literature review

- 3. Practice Based Learning:** During the rotation, the fellows should gather exceptional cases encountered during the rotation for presentation at fellow's case presentation conference and prepare discussion of the evaluation and management of these cases by performing an extensive evidence-based literature review.

**Outcomes:**

- Checklist Evaluation of live presentation by Attending Physician

- 4. Interpersonal and Communication Skills:** The fellow will:

- a. Effectively communicate with other health care professionals and ancillary staff in an ER and inpatient hospital setting.
- b. Effectively communicate medical knowledge with patients and their families in a manner that is appropriate for their knowledge base.
- c. Have the ability to obtain appropriate informed consent for procedures and communicate risks/benefits appropriate for these procedures/tests.

**Outcomes:**

- a. 360° Evaluation

- 5. Professionalism:** The fellow will:

- a. Be punctual and reliable
- b. Be appropriately dressed
- c. Respond promptly to consultation pages and phone calls regarding patient care

**Outcomes:**

- a. Patient Surveys
- b. 360° Evaluation

- 6. Systems Based Practice: The fellow will:**

- a. Utilize levels of health care are appropriate for the degree of illness (acute care, inpatient care, long-term care, etc.)
- b. Use proper billing and coding practices
- c. Follow regulations such as JCHO, CLIA, etc.

**Outcomes:**

- a. Chart Review

**V. OCHSNER MEDICAL CENTER – KENNER ROTATION (adult training site) – First and second year rotations are identical at this site**

The Ochsner Medical Center – Kenner rotation is with Program Co-Director Dr. Prem Kumar for the LSUHSC Department of Medicine who is responsible for conducting Adult Allergy/Immunology clinics and for providing inpatient consult services. In addition, another full-time faculty for the Department of Medicine, Dr. Sanjay Kamboj, also participates in the training of fellows for inpatient Adult A/I consults as well as in the Adult A/I clinics. Fellows-in-training participate in the care of patients in the out-patient clinics, in the emergency room, and in the hospital for inpatient consultations under the supervision of full-time faculty.

Ochsner Medical Center – Kenner is a well-equipped private acute care community hospital located in suburban New Orleans and affiliated with the Medical School. Ochsner Medical Center – Kenner serves the medical and health care needs of Kenner and the River Parishes of Louisiana and is a location for training in Adult A/I for fellows.

Faculty Responsibilities: The full-time faculty is responsible for bedside teaching, supervision of the fellows as well as formal education.

Faculty:

Dr. Prem Kumar – Co-Director of the Allergy/Immunology Fellowship Training Program, Associate Professor, Section of Allergy/Clinical Immunology, LSUHSC Department of Medicine

Dr. Sanjay Kamboj – Assistant Professor, LSUHSC Department of Medicine

**GOALS**

The goal of this program is to prepare eligible physicians so that at the time of graduation they are competent to practice the subspecialty of Allergy, Asthma and Immunology as specialists in the 21<sup>st</sup> Century. That goal is accomplished by arming them with up-to-date knowledge, training, and experience, by verifying competencies necessary to practice the subspecialty, and by meeting the requirements set forth by ACGME.

**First Year Fellows in Training:**

**OBJECTIVES**

1. **Patient Care:** The fellows-in-training must:
  - a. Demonstrate the ability to obtain a detailed history and perform a detailed physical examination.
  - b. Be able to synthesize the facts in the history and physical examination to arrive at a deferential diagnosis.
  - c. Be able to order or perform appropriate procedures necessary to elicit a correct diagnosis or help with the management of the patient.
  - d. Consider the safety and cost effectiveness of procedures at all times.
  - e. Formulate management plans including, but not limited to, the management of pharmaceutical agents.
  - f. The faculty pays specific attention to adverse drug reactions, drug interactions, polypharmacy and other medical errors that might compromise the health of the patient.
  - g. Understand concomitant adult medical disorders and their treatment which may interfere with the

- management of allergic disorders (i.e. beta blocker therapy and ACE inhibitors).
- h. Perform and interpret the following procedures:
    - i. patch testing for allergy contact dermatitis, including cosmetic hypersensitivity
    - ii. perform and interpret spirometry
    - iii. understand, perform, and interpret methacholine challenges
    - iv. understand, perform, and interpret aspirin challenges
    - v. demonstrate IgE-mediated hypersensitivity by performing skin prick test and intradermal test
    - vi. selection of appropriate patients, identifying clinically relevant allergens for preparation of allergy vaccines and the administration of allergen vaccinations.

### **Outcomes**

- a. Global Rating of live or recorded performance – observation of skin testing, patch testing, and spirometry.
- b. 360° Evaluation

### **2. Medical Knowledge:** The fellows-in-training must:

- a. Demonstrate basic knowledge of hypersensitivity and immunodeficiency disorders in adult patients.
- b. Have the ability to obtain data from the literature, use of on-line resources and provide literature documentation of treatment plans.

### **Outcomes**

- Written Examination – Performance on the In-Service Examination will serve as a guide in evaluating the success of the Medical Knowledge component of our program.

### **3. Practice Based Learning and Improvement:** During the rotation, the fellow is expected to:

- a. Perform Med-Line searches pertinent to the patient seen in clinic in order to update and enhance their knowledge.
- b. Identify complications and formulate a plan to address them and prevent them in the future.
- c. Demonstrate that he/she can compare the pre-immunotherapy conditions and post-immunotherapy results in a critical manner.

### **Outcomes**

- Record Review – Documentation through the medical record of complications, prevention and treatment methods, and flow sheet construction that follows clinical outcomes before and after immunotherapy.

### **4. Interpersonal and Communications Skills:** At the completion of the rotation, the fellow should demonstrate:

- a. Effective communication skills with other health care professionals in the office and hospital settings.
- b. Be able to obtain proper informed consent, including risks.

### **Outcomes**

- a. 360° Evaluation
- b. Record Review

### **5. Professionalism:** During the rotation, the fellow must show:

- a. Punctuality, professional demeanor, and reliable performance of his duties.
- b. Sensitivity to the special needs of patients, respect for their privacy and confidentiality of their medical information.
- c. Appropriate dress and appearance.

- d. Appropriate response to calls from the emergency room as well as patient exchanges.

**Outcomes**

- 360° Evaluation

**6. Systems-Based Practice:** During the rotation, the fellow should:

- a. Act as an advocate for his patients
- b. Utilize levels of care (acute care, outpatient, long-term acute care, nursing homes, home health care and durable equipment).
- c. Understand some of the rudiments of practice management, including billing, ICD-9 codes and CPT codes
- d. Understand safety issues in the hospital
  - i. The fellow is able to use the Information Technology system
  - ii. The fellow is able to write legible orders and medications.

**Outcomes**

- Patient Surveys

**Second Year Fellows in Training:**

**OBJECTIVES**

**1. Patient Care:** The fellows-in-training must:

- a. Demonstrate the ability to supervise residents and junior fellows in the detailed history and performance of a detailed physical examination.
- b. Be able to synthesize the facts in the history and physical examination to arrive at a single correct diagnosis.
- c. Supervise junior trainees in the selection and performance of appropriate procedures necessary to elicit a correct diagnosis or help with the management of the patient.
- d. Consider the safety and cost effectiveness of procedures at all times.
- e. Implement management plans including, but not limited to, the management of pharmaceutical agents.
- f. Identify adverse drug reactions, drug interactions, polypharmacy and other medical errors that might compromise the health of the patient.
- g. Understand concomitant adult medical disorders and their treatment which may interfere with the management of allergic disorders (i.e. beta blocker therapy and ACE inhibitors).
- h. Perform and interpret the following procedures with ease and dexterity, and supervise junior fellows and residents:
  - i. patch testing for allergy contact dermatitis, including cosmetic hypersensitivity
  - ii. perform and interpret spirometry
  - iii. understand, perform, and interpret methacholine challenges
  - iv. understand, perform, and interpret aspirin challenges
  - v. demonstrate IgE-mediated hypersensitivity by performing skin prick test and intradermal test

- vi. selection of appropriate patients, identifying clinically relevant allergens for preparation of allergy vaccines and the administration of allergen vaccinations.

**Outcomes**

- a. Global Rating of live or recorded performance – observation of skin testing, patch testing, and spirometry.
- b. 360° Evaluation

**2. Medical Knowledge:** The fellows-in-training must:

- a. Demonstrate superior knowledge of hypersensitivity and immunodeficiency disorders in adult patients.
- b. Have a fund of working knowledge from the literature, use of on-line resources and provide literature documentation of treatment plans (with minimal use of external resources).

**Outcomes**

- Written Examination – Performance on the In-Service Examination will serve as a guide in evaluating the success of the Medical Knowledge component of our program.

**3. Practice Based Learning and Improvement:** During the rotation, the fellow is expected to:

- a. Perform Med-Line searches pertinent to the patient seen in clinic in order to update and enhance their knowledge.
- b. Identify complications and formulate a plan to address them and prevent them in the future.
- c. Demonstrate that he/she can compare the pre-immunotherapy conditions and post-immunotherapy results in a critical manner.

**Outcomes**

- Record Review – Documentation through the medical record of complications, prevention and treatment methods, and flow sheet construction that follows clinical outcomes before and after immunotherapy.

**4. Interpersonal and Communications Skills:** At the completion of the rotation, the fellow should demonstrate:

- a. Effective communication skills with other health care professionals in the office and hospital settings.
- b. Be able to obtain proper informed consent, including risks.

**Outcomes**

- a. 360° Evaluation
- b. Record Review

**5. Professionalism:** During the rotation, the fellow must show:

- a. Punctuality, professional demeanor, and reliable performance of his duties.

- b. Sensitivity to the special needs of patients, respect for their privacy and confidentiality of their medical information.
- c. Appropriate dress and appearance.
- d. Appropriate response to calls from the emergency room as well as patient exchanges.

**Outcomes**

-- 360° Evaluation

**6. Systems-Based Practice:** During the rotation, the fellow should:

- a. Act as an advocate for his patients
- b. Utilize levels of care (acute care, outpatient, long-term acute care, nursing homes, home health care and durable equipment).
- c. Understand some of the rudiments of practice management, including billing, ICD-9 codes and CPT codes
- d. Understand safety issues in the hospital
  - i. The fellow is able to use the Information Technology system
  - ii. The fellow is able to write legible orders and medications.

**Outcomes**

-- Patient Surveys

**VII. ELECTIVES ROTATION – Electives for fellows, both adult and pediatric, can be taken the second year. Electives may include ENT and Dermatology.**

**ENT ROTATION:** This rotation generally lasts from four to six weeks and the fellows typically attend one ½-day clinic session each week.

## **GOALS:**

1. To learn the causes of rhinitis other than allergy and immunodeficiency (e.g, nasopharyngeal tumors, Wegener's Granulomatosis, and others)
2. To learn to interpret radiographic procedures, i.e., CT scans of sinuses
3. To learn and perform rhinolaryngoscopy, and (d) to learn the indicators for endoscopic sinus surgery in patients with chronic sinusitis.

Faculty: Faculty responsible for supervising the fellows include, but are not limited to:

Dr. Anita Jayekumar, Dr. Michael Haggmann, Dr. Kanotra, Department of Pediatric Otorhinolaryngology, LSUHSC

Faculty Responsibilities – The faculty is responsible for teaching, supervision, and formal education.

## **OBJECTIVES**

### **1. Patient Care**

- a. Perform a detailed history and physical examination
- b. Learn to perform an upper airway examination utilizing direct visualization, palpation, rhinolaryngoscopy, and imaging (X-ray, CT scans, etc.)
- c. Generate a differential diagnosis based upon the history and physical examination
- d. Learn to perform and interpret a nasal smear
- e. Learn to treat disorders of the paranasal sinuses using irrigation, antibiotics, topical anti-inflammatory medications, and functional endoscopic sinus surgery
- f. Learn the role of macrolide antibiotics, topical steroids, IVIG, and anti-reflux medications in the long term treatment of chronic sinusitis

### **Outcomes**

-- Checklist Evaluation of live or recorded performance by the Attending Physician

### **2. Medical Knowledge:** The fellow must:

- a. Master anatomy of the upper airway and sinuses based upon direct observation and imaging studies
- b. Have the ability to obtain data from the literature, use of on-line resources and provide literature documentation of treatment plans
- c. Learn the indications for endoscopic surgery in patients with sinusitis

### **Outcomes**

-- Written Examination (in-service examination)

### **3. Practice Based Learning and Improvement:** During the rotation, the fellow is expected to show familiarity with the literature and applying information from the literature to his/her patient's case.

### Outcomes

-- Written Examination

- 4. Interpersonal and Communications Skills:** At the completion of the rotation, the fellow should demonstrate:
- a. Effective communication skills with other health care professionals in the office and hospital settings
  - b. The ability to obtain proper informed consent, including risks

### Outcomes

- a. Record Review – evaluation of letters written to referring physicians
- b. Patient Surveys

- 5. Professionalism:** During the rotation, the fellow must show:

- a. Punctuality, professional demeanor, and reliable performance of his duties.
- b. Sensitivity to the special needs of patients, respect for their privacy and confidentiality of their medical information
- c. Appropriate dress and appearance
- d. Appropriate response to calls from the emergency room as well as patient exchanges

### Outcomes

- a. Patient Surveys
- b. 360° Evaluation

- 6. Systems Based Practice:** During the rotation, the fellow must:

- a. Act as an advocate for his patients
- b. Understand some of the rudiments of practice management, including billing, ICD-9 codes, and CPT codes
- c. Understand safety issues in the hospital
  - i. The fellow is able to use the Information Technology system
  - ii. The fellow is able to write legible orders and medications

### Outcomes

-- Record Review

**DERMATOLOGY ROTATION:** The Dermatology Elective takes place at Children’s Hospital Dermatology Clinics

Faculty:

Dr. J. Poole

## **GOALS**

The fellows-in-training will demonstrate that they have the necessary knowledge and skills to evaluate and treat patients with cutaneous manifestations of hypersensitivity, immunodeficiency, autoimmune, and chronic inflammatory disorders.

## **OBJECTIVES**

- 1. Patient Care:** During the elective rotation, the resident is expected to:
  - a. Demonstrate the ability to obtain a complete history and physical examination with special emphasis upon the description of primary and secondary lesions, lesion configuration, and lesion distribution and morphologic patterns
  - b. Demonstrate a satisfactory level of competency treating patients in these categories of dermatologic conditions:
    - i. Immune-mediated dermatologic disorders
      - Atopic Dermatitis
      - Contact Dermatitis
      - Urticaria and angioedema
      - Autoimmune Blistering diseases
      - Psoriasis
    - ii. Miscellaneous Disorders
      - Graft versus host disease
      - Mastocytosis
  - c. Demonstrate a satisfactory level of competency in the performance of patch testing

### **Outcomes**

- a. Checklist Evaluation of live performance
- b. Record Review

- 2. Medical Knowledge:** During the elective rotation, the fellow-in-training should:

- a. Understand the basic science of the cutaneous immune system
- b. Understand the basics of topical anti-inflammatory therapy, emollient therapy and hydration therapy
- c. Understand the basis of food elimination and environmental allergen/irritant elimination therapy in the treatment of cutaneous hypersensitivity disorders

### **Outcomes:**

- Written Examination – Performance on the In-Service Examination will serve as a guide in evaluating the success of the Medical Knowledge component of our program

**3. Interpersonal and Communication Skills:**

- a. Have the ability to relate professionally to the patient with cutaneous disorders that impact upon self-esteem and socialization
- b. Have the ability to inform patients about the risks and expectations of dermatologic therapies.

**Outcomes:**

- a. Checklist Evaluation of live performance
- b. Patient Survey

**4. Professionalism:** During the elective rotation the fellows-in-training must:

- a. Demonstrate punctuality, professional demeanor and reliable performance of his duties
- b. The fellows-in-training should be attentive to the special needs of patients with skin disorders and respect their privacy and confidentiality
- c. Dress appropriately

**Outcomes:**

- 360° Evaluation

**5. Practice Based Learning and Improvement:** During the elective rotation, the fellows-in-training should:

- a. Demonstrate that he/she can compare pretreatment dermatologic disorders and post-treatment dermatologic disorders in a critical manner (SCORAD system in atopic dermatitis)
- b. Have the ability to manage complications of therapy and formulate a plan to anticipate and prevent them in the future (striae, telangiectasia, and skin thinning secondary to topical glucocorticosteroids)

**Outcomes:**

- Chart Review

**6. Systems Based Practice:** During the elective rotation, the fellows-in-training should:

- a. Demonstrate an understanding of ethical use of CPT coding
- b. Understand the need for multidisciplinary teamwork—the need for Psychiatry, Occupational Therapy, Dermatology, Allergy/Immunology, and Play Therapy in the management of severe atopic dermatitis in the child or adolescent

**Outcomes:**

- Chart Review

**Additional Clinical Component:**

**RHEUMATOLOGY CLINICS:** This clinical component takes place at Children's Hospital in New Orleans.

**Faculty:**

Dr. Abraham Gedalia

Dr. Victoria Dimitriades

Dr. Amanda Brown

**GOALS**

The fellows-in-training will demonstrate that they have the necessary knowledge and skills to evaluate and treat patients with rheumatologic, autoimmune, and chronic inflammatory disorders.

**1. Patient Care:** The fellows-in-training must:

- a. Demonstrate the ability to obtain a complete history and physical examination in patients with rheumatologic, autoimmune, and chronic inflammatory disorders
- b. demonstrate the ability to generate a differential diagnosis based upon features obtained from the history and physical examination
- c. Demonstrate the ability to order appropriate and cost-effective laboratory tests
- d. Demonstrate the ability to treat the diagnosed disorder with appropriate medications

**Outcomes:**

-- Chart Review

**2. Medical Knowledge:** The fellows-in-training must:

- a. Demonstrate an understanding of the physiologic and immunologic basis of rheumatologic, autoimmune, chronic inflammatory disorders, autoinflammatory disorders.
- b. Have the ability to obtain data from the literature, use of on-line resources and provide literature documentation of treatment plans
- c. Demonstrate an understanding of treatments using monoclonal antibodies, cytokines, immunosuppressives, fusion proteins, and anti-inflammatory medications.

**Outcomes:**

-- Written Examination – Performance on the In-Service Examination will serve as a guide in evaluating the success of the Medical Knowledge component of our program

**3. Practice Based Learning and Improvement:** During the elective rotation, the resident should:

- a. Demonstrate that he/she can compare the pre-treatment condition and post-treatment results in a critical manner
- b. Identify complications, formulate plans to address them, and prevent them in the future
- c. Show familiarity with the literature and apply information from the literature to his case

**Outcomes:**

-- Chart Review

- 4. Interpersonal and Communications Skills:** At the completion of the rotation, the fellows-in-training should demonstrate:
- a. Effective communication skills with other health care professionals in the office and hospital settings
  - b. The ability to obtain proper informed consent and explain risks

**Outcomes:**

-- Patient Surveys

- 5. Professionalism:** During the elective rotation, the fellows-in-training must show:
- a. Punctuality, professional demeanor, and reliable performance of his duties
  - b. Sensitivity to the special needs of patients, respect for their privacy and confidentiality of their medical information.
  - c. Appropriate dress and appearance
  - d. Appropriate response to calls from the emergency room as well as patient exchanges

**Outcomes:**

-- 360° Evaluation

- 6. Systems Based Practice:** During the elective rotation, the fellows-in-training should:
- a. Act as an advocate for his patients
  - b. Utilize levels of care (acute care, outpatient, long term acute care, nursing homes, home health care, and durable equipment)
  - c. Understand the relation between the rheumatologist in the hospital and his colleagues
  - d. Understand some of the rudiments of practice management, including billing, ICD-9 codes and CPT codes
  - e. Understand safety issues in the hospital
    - i. The fellows-in-training can use the Information Technology system
    - ii. The fellows-in-training can write legible orders and medications

**Outcomes:**

-- Chart Review

**VIII. THE EDUCATIONAL COMPONENT: (all conferences and lectures)**

**GOALS**

At the end of two years, the Fellowship Program at LSUHSC will have presented lectures, review sessions, DVD presentations, and case presentations that review the core curriculum. Self study from A/I texts, A/I

Primer and Mini-Primer and the Program Director's Reading List serves to round out the educational experience.

1. Overview of the Immune System

Organization and Function of the Immune System

- a. Thymic development and shaping peripheral systemic T-cell immunity
- b. Cutaneous immunity
- c. Intestinal/mucosal immunity
- d. Primary immune function of cellular elements of the immune system
  - i. T-cells
  - ii. B cells
  - iii. Neutrophils
  - iv. Eosinophils
  - v. Mast cells
  - vi. Basophils
  - vii. Antigen presenting cells
  - viii. Natural Killer Cells
  - ix. Platelets

2. Immune Mechanisms

- a. Innate versus adaptive immunity
  - i. Complement and the innate immune response
  - ii. Pattern recognition receptors (MBP, Toll-like Receptors, CD14, etc.)
  - iii. Natural antimicrobial agents
    - Reactive oxygen species
    - Releasable granule proteins (defensins, lactoferrin, cathelicidins)
- b. The major histocompatibility complex—molecular structure and function
- c. Immunogenetics – Gene rearrangements in the generation of immune system diversity
- d. Antigen-presenting cells—processing and presentation of conventional and superantigens
- e. Gell and Coombs classification of immune responses
  - i. Type I – immediate hypersensitivity response
    - IgE binding and signal transduction
    - Preformed and newly synthesized mediator release
    - Late phase reactions.
  - ii. Type II – Antibody induced reactions response
  - iii. Type III – immune-complex mediated reactions
  - iv. Type IV – Cell mediated/delayed hypersensitivity response
- f. T cell mediated immunity
  - i. T cell activation – T cell receptor structure and function, epitope recognition and accessory molecules in signal transduction
  - ii. Cytokines and co-stimulatory molecules in T cell activation
  - iii. T cell mediated immune responses – participating cells; properties and functions of antigen presenting cells
  - iv. T cell subsets
  - v. NK T cells
- g. B cell mediated immunity
  - i. B cell activation – cytokines and signal transduction
  - ii. Epitope recognition and immunoglobulin production

- iii. Maturation of B lymphocytes
  - iv. Maturation of the antibody response
  - v. Biologic process initiated by antibody: opsonization, complement fixation, antibody dependent cell mediated cytotoxicity
  - vi. IgE-mediated immediate and late phase reactions
  - vii. Immune complexes – immunologic properties and mechanisms of clearance
  - h. Other immune and inflammatory mechanisms
    - i. Natural killer cells, their CD markers and functions
    - ii. Lymphokine activated killer cells and their effects
    - iii. Cutaneous basophil hypersensitivity
    - iv. Kinin-mediated inflammation
    - v. Arachidonic acid metabolites and inflammation
    - f. Cytokines/Chemokines and their receptors
    - g. Growth factors
  - i. Receptor ligand interactions in immune functioning – signal transduction resulting from receptor ligand interaction; genetic polymorphisms producing gain or loss of function
  - j. T & B cell Immunologic Memory (Including CD markers of cells involved in immunological memory)
3. Mucosal Immunity
- a. Mucosal barrier innate defenses
    - i. Barrier function and local enzyme systems
    - ii. Normal flora
    - iii. Complement
    - iv. Defensins
  - b. Antigen transport
  - c. Adaptive Immunity
    - i. Responses to bacteria viruses and parasites
    - ii. Mucosal immunoglobulins
      - Secretory IgA
      - Ig Transport
      - FcyRII function
      - Mucosal associated lymphoid tissue (MALT)
  - d. Passive immunization
4. Transplantation Immunology
- a. Allograft rejection
  - b. Graft versus host reactions (GVHR)
  - c. Maintenance of tolerance
5. Tumor Immunology
- a. Tumor specific and tumor associated antigens
  - b. Oncogenes, translocations and tumor suppressor genes
6. Immunoregulatory Mechanisms
- a. Tolerance

- b. Idiotypic network
- c. Apoptosis
- d. Anergy

## 7. Laboratory Measurements

- a. Principles and methodology of:
  - i. measurements of immunoglobulin levels, immunoglobulin classes and subclasses
  - ii. serologic testing
    - ELISA, immunoblot
    - autoimmune serology
    - in vitro testing techniques for specific IgE
    - RAST Inhibition techniques
    - serologic testing for infectious disease
  - iii. flow cytometry – cell surface marker and intracellular techniques
  - iv. cellular functional responses
    - Chemotaxis and adhesion
    - mitogen or antigen induced proliferation and activation
    - phagocytosis and intracellular killing
    - cellular cytotoxicity
  - v. measurement of immune complexes, cryoprecipitable proteins, total serum complement activity, complement components and C1 Inhibitor assays
  - vi. histocompatibility typing
  - vii. genetic techniques including TRECs, PCR and use of probes.
  - viii. Hybridoma and monoclonal antibody technology
    - cytokine and mediator measurement
- b. Test-performance characteristics: principles of sensitivity, specificity, predictive value, and ROC analysis
- c. Unproven and inappropriate diagnostic tests for allergic and immune deficiency diseases

## 8. Anatomy and Physiology

- a. Normal anatomy and physiology
  - i. Upper airway – nose, sinuses, middle ear
  - ii. Lower airway
  - iii. Skin
  - iv. Gastrointestinal tract
  - v. Lymphoid tissue
- b. Pathology of primary atopic disorders
  - i. Asthma (including airway remodeling)
    - Children
    - Adults
  - ii. Rhinitis and rhinosinusitis
    - Allergic
    - Infectious
    - Nonallergic

- Nasal polyps
- iii. Atopic dermatitis

- iv. Early and late responses to allergen challenge
    - nasal
    - bronchial challenge
    - cutaneous challenge
  - v. Role of structural cells
    - epithelium
    - endothelium
    - smooth muscle
    - fibroblasts
    - mucociliary cells
- c. Measurements and interpretation of lower airway function
- i. Spirometry: FVC, FEV1, FEV/FVC, FEF 25-75, Flow volume loop, pre-and postbronchodilator values
  - ii. Provocative challenges (exercise, methacholine, allergen, other): indications, performance, and interpretation, predictive value of asthma
9. Pharmacology
- a. Pharmacology and pharmacokinetics of drugs used in allergy/immunology
    - i. Glucocorticoids
    - ii. Beta-agonists and antagonists
    - iii. Mast cell active agents (cromolyn/nedocromil)
    - iv. Cyclooxygenase and leukotriene pathway modulators
    - v. Anticholinergics
    - vi. Theophylline
    - vii. Antihistamines
    - viii. Immunosuppressive agents (calcineurin inhibitors, methotrexate, azathioprine, etc.)
    - ix. Immunomodulatory medications (see section V.G)
    - x. Agents and principles of aerosolized respiratory treatments
    - xi. Topical dermatologic and ophthalmic therapy
    - xii. Vaccines against transmissible agents
    - xiii. Drug interactions
  - b. Allergenic proteins and extracts for diagnosis and treatment
    - i. Inhalant Allergenic Protein Sources
      - Pollen and mold/fungi
      - Insects and Arachnids
      - Animals
      - Aerobiology and environmental assessment of allergens, irritants and pollutants
    - ii. Allergen extract preparation and standardization methods
    - iii. Clinical use of allergenic extracts as therapeutic agents
10. Research Principles
- a. Research ethics
  - b. Experimental design

- c. Data analysis, biostatistics and use of computer database, spreadsheet and statistical analysis applications
- d. Epidemiology
- e. Informed consent (ABAI content added)
- f. Adverse event reporting (ABAI content added)
- g. Grant writing

## 11. Clinical Sciences

- a. Allergic diseases and related disorders
  - i. Upper airway disease
    - Rhinitis, sinusitis, nasal polyposis, otitis (bacterial and serous), and laryngeal disorders
    - Clinical skills and interpretive strategies for diagnosis of upper airway diseases: skin testing (epicutaneous and intracutaneous); cytology of nasal secretions; understanding of indications for and methodology of nasal challenges; rhinoscopy; nasal and ear examination; gross assessment of upper airway imaging studies
  - ii. Eye disease
    - Allergic and vernal conjunctivitis, iritis, iridocyclitis
    - Clinical skills: eye examination
  - iii. Dermatologic Disease
    - Urticaria, angioedema, dermatographia, atopic dermatitis, contact dermatitis, urticaria pigmentosa, bullous disease, drug rashes, erythema multiforme and toxic epidermal necrolysis, erythema nodosum, and other immunologic skin diseases
    - Clinical skills: proper cutaneous examination, patch testing, drug skin testing (immediate and delayed type hypersensitivity skin tests), testing for physical urticaria/angioedema, and an understanding of dermatopathology and immunofluorescent tests
  - iv. Lower respiratory tract disease
    - Asthma and related disorders (exercise-induce, allergic bronchopulmonary aspergillosis, sulfite-related, and intrinsic); including assessment of severity and control; hypersensitivity pneumonitis; chronic obstructive pulmonary disease; bronchitis, croup & RSV; cystic fibrosis, immotile cilia syndrome, sarcoid, occupational lung disease, chronic cough
    - Specific skills and interpretative strategies to be acquired: chest exam interpretation of pulmonary function testing, bronchial challenges, sputum and exhaled breath analysis, and gross interpretation of imaging studies
  - v. Drug allergy (See dermatologic disorders and anaphylaxis)
    - Distinction between hypersensitivity and intolerance
    - Cytotoxic, immune complex and delayed hypersensitivity reactions
    - Aspirin and NSAID reactions
    - Reactions to vaccines
    - Photoallergy, phototoxicity, drug fever, and serum sickness reactions
    - Clinical skills – specific testing and provocative challenges
  - vi. Adverse reactions to ingestants
    - Food sensitivities-IgE mediated, food intolerance, gluten sensitivity
    - Food-additive reactions
    - Eosinophilic esophagitis and gastroenteritis
    - Clinical skills mastered: set up double blind placebo controlled food challenge, interpretation of skin prick and in vitro testing to foods

- vii. Anaphylaxis and anaphylactoid reactions
    - Causes (ingestants, exercise, allergy immunotherapy, latex, radiocontrast media) case definition and common presentations
    - Laboratory evaluation of anaphylactic episode, allergy testing, tryptase
    - Treatment of anaphylaxis including cardiopulmonary resuscitation
      - Acute treatment
      - Patient education, use of Epi-pen, Epi-pen Jr.
  - viii. Insect hypersensitivity
    - Classes of insects associated with hypersensitivity
    - Skin prick, intradermal and in vitro testing to stinging insects
    - Predictive value of clinical history and testing for adult and pediatric population
    - Algorithm for history positive, test negative, stinging insect reactive patient
    - Venoms, formulation, schedule and duration of immunotherapy
  - ix. Economic costs of diagnosis and treatment of allergic diseases
  - x. Psychosocial aspects of allergic disease and chronic illness, failure of adherence to therapy
- b. Immunodeficiency Diseases
- i. Primary immunodeficiency diseases (including clinical presentation, diagnostic approach, cellular profile, genetic basis, prognostic factors and therapeutic options)
    - Combined immunodeficiencies syndromes
    - Predominant antibody deficiencies
    - Other well defined immunodeficiency syndromes
    - Complement deficiencies including hereditary acquired C1 inhibitor deficiency
    - Congenital defects of phagocytic number, function and adhesion
    - Clinical skills for diagnosis and treatment
  - ii. Acquired immunodeficiency diseases
    - Due to infection, AIDS and other
    - Nutrition and metabolic related
    - Associated with malignancy and infectious processes
    - Iatrogenic immunodeficiency
    - Clinical skills for diagnosis and treatment
- c. Immunoregulatory Disorders – Interpretation of physical findings, diagnostic tests and management of:
- i. The vasculitides (small, medium and large vessels)
  - ii. Immune rheumatic disorders
  - iii. Immune renal disorders
  - iv. Immune endocrine and reproductive disorders
  - v. Immune pulmonary disorders
  - vi. Immune gastrointestinal and hepatobiliary disorders
  - vii. Immune neurologic and neuromuscular disorders
  - viii. Immune hematologic disorders
  - ix. Immune ocular disorders
  - x. Immune skin disorders

- d. Transplantation Medicine
  - i. Recognition of alloantigens
  - ii. Alloreactive T cell activation
  - iii. Allograft rejection
    - Hyperacute
    - Acute
    - Chronic
  - iv. Prevention and treatment of allograft rejection
    - Immunosuppression
    - Methods to reduce allograft immunogenicity
    - Methods to induce allograft host tolerance
  - v. GVHD: acute and chronic
    - Prevention
    - Treatment
  
- e. Immune system related malignancies and cellular disorders
  - i. B cell and plasma cell neoplasms
  - ii. T cell neoplasms
  - iii. Monocyte/macrophage neoplasms
  - iv. Mast cell dyscrasias
  - v. Eosinophilic disorders
  - vi. Cryopathies and amyloid
  - vii. Clinical skills: Physical findings associated with neoplasms, interpretation of serum protein electrophoresis and immunoelectrophoresis, interpretation of serum immunoglobulin levels, and interpretation of lymphocyte subset data
  
- f. Established and evolving immune-based treatment modalities
  - i. Glucocorticoids and Immunosuppressants (also see Section III.A.)
  - ii. Modified allergen immunotherapy
  - iii. Cellular immune reconstitution including stem cell and bone marrow transplant
  - iv. Immunoglobulin replacement therapy
  - v. Nucleic acid-based therapies (DNA vaccines, CpG, gene insertion, antisense nucleotides)
  - vi. Cytokine receptors and receptor antagonists (IFN, antiTNF, etc.)
  - vii. Recombinant molecules and humanized monoclonal antibodies (imatinib, infliximab, omalizumab, rituximab)
  - viii. Plasmapheresis and cytopheresis
  - ix. Probiotics
  - x. Unproven and controversial therapies
  
- 12. Basics of ACGME core competencies
  - a. Professionalism
  - b. Communication skills
  - c. Practice-based learning
  - d. Systems-based practice

**Outcomes:**

- a. Passing Score on A/I Certification Examination

**REQUIRED DIDACTIC SESSIONS:**

**A/I SUMMER SERIES CONFERENCE (AI BOOT CAMP)**

**GOALS**

To introduce the basic concepts of the specialty of Allergy/Immunology via a series of lectures and presentations.

**OBJECTIVES**

Via A/I faculty lectures and DVD reviews (ex. Medical College of GA and ABAI Board Review DVDs) the fellows are introduced to key concepts in Allergy/Immunology. This conference takes place on Tuesday 8-9am and Friday 8-9am and 9-10am during July and August (during the times normally reserved for A/I Case Conference, Core Lecture, and Basic Immunology Review). As part of the introduction of the fellows to the concept of practice based learning, pre and post tests are administered before and after these lectures. At the end of the lecture series, the tests are given in their entirety as a measure of retention of medical knowledge.

**CITY-WIDE CASE PRESENTATION CONFERENCES**

**GOALS**

To present and review cases from the LSUHSC clinics that represent common as well as unusual Allergy/Immunology patients in order to improve their care and improve patient safety.

**OBJECTIVES**

To review the medical history, physical examination, laboratory features, differential diagnosis, and latest medical literature on cases that present to the allergy-immunology services at the LSUHSC A/I Fellowship Program (or Tulane Medical Center for the participants from the Tulane A/I Program). To correlate basic science mechanisms with clinical management approaches to common as well as rare and complex diseases. This conference is held every Friday morning from 9:00 AM to 10:00 AM. It is held in the conference room at Children's Hospital Research Institute for Children and is attended by faculty and fellows of both the LSUHSC and Tulane A/I programs. Fellows-in-training must attend this mandatory conference and attendance is documented. The cases are presented by the fellows-in-training. Handouts (with references) covering the topic presented are prepared by the fellows-in-training (or the information is disseminated electronically). The fellowship program's faculty and community allergist/immunologists also attend the conference. Fellows present approximately 4 cases per year.

**IMMUNODEFICIENCY PATIENT CASE REVIEW / STEM CELL TRANSPLANT MTG**

**GOALS**

To have the fellows-in-training follow and manage immunodeficiency patients from clinical presentation

through molecular diagnosis and stem cell transplantation or other therapy during their two years of fellowship training.

### **OBJECTIVES**

The fellows-in-training review and present each case seen in clinic, short-stay intravenous gammaglobulin unit, or inpatient service during the preceding week. Detailed discussions of current problems, pre-transplant myeloablative or immunosuppressive therapies, graft-versus-host-disease, post-transplant immunologic reconstitution, home infusion gammaglobulin, psycho-social problems, insurance reimbursement, prophylactic management, etc., are carried out by the fellows-in-training, attending faculty, laboratory and research immunologists, and hematology/oncology faculty. These meetings are held at Children's Hospital every Thursday from noon to 1:00 pm. It is a mandatory conference and attendance may be documented. The cases and discussions are led by the fellows-in-training and handouts are prepared. All attending faculty members are present at the conference.

## **BASIC IMMUNOLOGY REVIEW**

### **GOALS**

Topics in clinical and basic immunology are reviewed by the A/I fellows with mentoring from A/I faculty.

### **OBJECTIVES**

Fellows prepare by reviewing book chapters from Abbas' Cellular and Molecular Immunology 6<sup>th</sup> edition. All fellows prepare a series of multiple choice questions that are distributed among the participants. Fellows discuss these questions with supervision of immunology faculty, and then retain them for future review during board exam preparation. This conference is held at Children's Hospital on Friday from 10-11am for approx 30 sessions.

## **ALLERGY/IMMUNOLOGY CORE LECTURE CONFERENCE**

### **GOALS**

Topics in Allergy/Immunology are presented by A/I faculty, guest researchers who present their current work, or by other multimedia format (on-line lecture sources/DVD/etc).

### **OBJECTIVES**

To present state-of-the-art research topics in Allergy/Immunology to the fellows-in-training in an intimate setting that allows in depth discussions of questions, controversies, etc. The guest lecturers may be faculty members from the LSHUSC/Tulane centers or they may come from outside institutions. This conference is held every Friday at Children's Hospital from 8:00 AM to 9:00 am. It is a mandatory conference and attendance is documented. Faculty, fellows-in-training, residents and medical students from both institutions attend the conference. A component of this lecture series is the presentation of up-to-the minute information from basic and clinical researchers describing their latest work on relevant A/I topics.

## **BENCH TO BEDSIDE CONFERENCE:**

### **GOALS**

To review Basic Molecular and Cellular Immunology and Clinical Allergy Immunology in preparation for the American Board of A/I Certification Examination.

### **OBJECTIVES**

This newly developed lecture series is designed to allow fellows to take the information gained in the core A/I lecture series, and incorporate it into a practical knowledge base. Topics include allergic disorders, immunology (clinical and basic) and aerobiology. Fellows prepare for the lecture by reading relevant literature or book chapters (Leung and Middleton as well as the TPD Reading List. For various topics, fellows take short quizzes (multiple choice questions) prepared by Dr. Dimitriades. This conference is held on Friday from 11:00 am to 12:00 am. It is held at Children's Hospital of New Orleans.

## **JOURNAL CLUB:**

## **GOALS**

To review current topics and studies from peer reviewed journals. Topics presented by fellows-in-training must represent the state-of-the-art in the field of allergy/immunology. Topics reviewed vary from clinical trials of allergen vaccines to the use of recombinant cytokine therapy in immunodeficiency patients with infections.

## **OBJECTIVES**

To allow fellows-in-training to choose topics and critically review research hypotheses, research design, statistical methods, research methods, and conclusions. This conference is held on Friday (approx. 3 per month) from noon to 1:00 PM at Children's Hospital. Attendance is mandatory and attendance may be documented.

## **ADDITIONAL CONFERENCES/EDUCATIONAL COMPONENTS:**

Jeffrey Modell Primary Immunodeficiency Conference: yearly 1 day symposium

TEWS: Teaching Excellence Workshop Series: 5 workshops of 2 hours duration

Fellowship Core Lecture Series (through the Dept of Peds): 6 sessions over approx. 3 months

Louisiana Society of Asthma Allergy and Immunology Annual Meeting: 2 day regional conference held yearly (fellows present cases)

## **IX. RESEARCH COMPONENT**

### **GOALS**

The fellows-in-training are required to participate in clinical or basic science research resulting in a scholarly work product. The project may represent an original concept or the project may represent a sub-study of an ongoing project that is already underway by medical center faculty.

### **OBJECTIVES**

The fellow-in-training will:

- 1) Develop the hypothesis
- 2) Complete the literature review
- 3) Develop the project design, methods, and statistical methods under the supervision of a faculty member.
- 4) Complete and submit an IRB application
- 5) Initiate the project and bring it through to completion
- 6) Submit the project for publication in a peer reviewed journal (if possible)

The Allergy/Immunology Fellows will actively participate in the research activities and scholarly life of the Division. Initially Fellows will be allowed to participate in ongoing projects in the division. However, the Fellow may also engage in a hypothesis-driven research project within the division for which they have primary responsibility. The research project must have the approval of the Program Director. Involvement in research activity must result in the generation of a specific written "work product." The division puts highest priority in preparation of a manuscript that would be suitable for submission in a peer-reviewed publication in which the resident plays a substantial role (first authorship). Extramural grant applications that include substantial preliminary data collected and analyzed by the Fellow and have been accepted for

funding or favorably reviewed may also qualify. Other forms of scholarly work product are acceptable to document this component of the program (grand rounds presentations, abstract/poster presentations etc)

To assess the Fellow's progress in research activity, a Scholarship Oversight Committee will be formed for the Fellow once a research project has been formulated. The Fellow will present their work in oral and written form periodically to their Scholarship Oversight Committee (SOC) and elsewhere. The SOC will meet and determine if the Fellow's final work product meets the requirements of the Fellowship and so advise the Fellow and Program Director.

LSUHSC and Children's Hospital have clinical laboratories under the direction of Dr. A. Ochoa and Dr. Leiva, respectively. These may be used for laboratory research. In addition, the LSUHSC/Tulane GCRC has research laboratories that may also be used for fellows-in-training projects. Dr. Kumar is the Director of the HLA laboratory at LSUHSC and readily makes that facility available for fellow-in-training sponsored projects. Clinical research projects may be carried out at various sites in the LSUHSC campus and clinics. Funding may be available through the GCRC.

#### **IV. Achievement of Fellowship Goals and Objectives**

In order to achieve the educational goals and objectives, the Allergy/Immunology Fellowship Program at LSUHSC provides a diverse learning environment and varied experiences. Under the guidance of the Faculty, the Program provides opportunities for learning and development of clinical, scholarly and research skills in formal and informal settings including: didactic and divisional conferences, patient care meetings, inpatient and outpatient consultations, "hands on" research projects, inpatient ward rounds, outpatient clinics, and participation in regional and national meetings pertinent to allergy/immunology. The Goals and Objectives for each rotation are found as an appendix to this manual.

The core reading list (recommended by the ABAI and training programs nationwide) is also required to be reviewed by fellows. It is available for download online at:

**[www.aaaai.org/professionals/careers/trainingprograms/reading\\_list.stm](http://www.aaaai.org/professionals/careers/trainingprograms/reading_list.stm)**

#### **2. Research and Scholarly Activities**

The sharing of medical knowledge and contributing new knowledge is an important role for the academic allergist/immunologist. A required part of the Fellowship is to develop skills and experience in teaching and research.

- a) **Research Training** – The Fellow is mentored in developing and executing a research project by a faculty member. Initially the Fellow may participate in on-going research activities of the division. With experience, the Fellow can develop a project for which he/she has primary responsibility for the design, IRB approval, execution, data collection and analysis and presentation of results. All residents participating in clinical research within LSUHSC are required to complete CITI Training modules on the LSUHSC Website. These provide guidance and sessions devoted to responsibilities of

human subjects' research, hypothesis development, methods development, collection and storage of data, statistical analysis of data, and data presentation. (Sessions on animal use will be provided if related to the research). The fellows participate in selected nationally organized meetings to enhance research by allergist/immunologists at the fellowship level.

- b) Teaching – The Fellow will engage in preparation and presentation of clinical cases, journal articles and research topics to colleagues in the division during conferences. These presentations will be critiqued by faculty mentors. A series of teaching workshops is arranged to hone these skills. The Fellow will also participate in informal teaching and guidance of General Pediatrics, Medicine, and Med-Peds residents on the ward, doing electives in the division and in patient clinics.

Procedures: There is a departmental procedure manual that is available for review by the fellows and faculty alike. It is always subject to review and updating in order to maintain standard of care.

### 3. Research/Scholarly Activity

## **A/I FELLOWSHIP PROGRAM POLICIES**

### **Policy on Professionalism and Learning Environment**

In keeping with the Common Program Requirements effective 7/1/2011 our GME programs wish to ensure:

1. Patients receive safe, quality care in the teaching setting of today.
2. Graduating residents provide safe, high quality patient care in the unsupervised practice of medicine in the future.
3. Residents learn professionalism and altruism along with clinical medicine in a humanistic, quality learning environment.

To that end we recognize that patient safety, quality care and an excellent learning environment are about much more than duty hours. Therefore, we wish to underscore any policies address all aspects of the learning environment not just duty hours. These include:

1. Professionalism including accepting responsibility for patient safety
2. Alertness management.
3. Proper supervision
4. Transitions of care
5. Clinical responsibilities
6. Communication / teamwork

Residents must take personal responsibility for and faculty must model behaviors that promote:

1. Assurance for fitness of duty.
2. Assurance of the safety and welfare of patients entrusted in their care.

3. Management of their time before, during and after clinical assignments.
4. Recognition of impairment (e.g. illness or fatigue ) in self and peers.
5. Honest and accurate reporting of duty hours, patient outcomes and clinical experience data.

The institution further supports an environment of safety and professionalism by:

1. Providing and monitoring a standard Transitions policy as defined elsewhere.
2. Providing and monitoring a standard policy for Duty Hours as defined elsewhere.
3. Providing and monitoring a standard Supervision Policy as defined elsewhere.
4. Providing and monitoring a standard master scheduling policy and process in New Innovations.
5. Adopting and institution wide policy that all residents and faculty must inform patients of their role in the patient's care.
6. Providing and monitoring a policy on Alertness Management and Fatigue Mitigation that includes:
  - a. On line modules for faculty and residents on signs of fatigue,
  - b. Fatigue mitigation, alertness management including pocket cards, back up call schedules, promotion of strategic napping.
6. Assurance of available and adequate sleeping quarters when needed.
7. Requiring that programs define what situations or conditions require communication with the attending physician.

***(Professionalism and Learning Environment policy adopted from ACGME Quality Care and Professionalism Task Force AAMC Teleconference July 14, 2010. )***

Process for implementing Professionalism Policy:

The programs and institution will assure effective implementation of the Professionalism Policy by the following:

1. Program presentation of this and other policies at program and departmental meetings.
2. Core Modules for faculty and residents on Professionalism, Duty Hours, Fatigue recognition and mitigation and alertness management, substance abuse and impairment.
3. Required LSBME orientation.
4. Institutional Fitness for Duty and Drug Free Workplace policies.
5. Institutional Duty Hours Policy which adopts in toto the ACGME Duty Hours language.
6. Language added specifically to the Policy and Procedure manual, the House Officer manual and the Resident Contract regarding Duty Hours Policies and the responsibility for and consequences of not reporting Duty Hours accurately.
7. Comprehensive Moonlighting Policy incorporating the new ACGME requirements.
8. Orientation presentations on Professionalism, Transitions, Fatigue Recognition and Management and Alertness Management.

Monitoring Implementation of the Policy on Professionalism:

The program and institution will monitor implementation and effectiveness of the

Professionalism Policy by the following:

1. Evaluation of residents and faculty including:
  - a. Daily rounding and observation of the resident in the patient care setting
  - b. Evaluation of the residents ability to communicate and interact with other members of the health care team by faculty, nurses, patients where applicable and other members of the team.
  - c. Monthly and semi-annual competency based evaluation of the residents.
  - d. By the institution in Annual Reviews of Programs and Internal Reviews.
  - e. By successful completion of modules for faculty and residents on Professionalism, Impairment, Duty Hours, Fatigue Recognition and Mitigation and Alertness Management and others.
  - f. Program and Institutional monitoring of duty hours and procedure logging as well as duty hour violations in New Innovations.

### **Policy on Effective Transitions**

The transitions policy is created in recognition that multiple studies have shown that transitions of care create the most risk or medical errors (ACGME teleconference July 14, 2010.) In addition to the below specific policies, promotion of patient safety is further ensured by:

1. Provision of complete and accurate rotational schedules in New Innovations
2. Presence of a back up call schedule for those cases where a resident is unable to complete their duties.
3. The ability of any residents to be able to freely and without fear of retribution report their inability to carry out their clinical responsibilities due to fatigue or other causes.

Process:

Residents receive educational material on Transitions in Orientation and as a Core Module.

In any instance where care of a patient is transferred to another member of the health care team an adequate transition must be used. Although transitions may require additional reporting than in this policy a minimum standard for transitions must include the following information:

1. Demographics
  - a. Name
  - b. Medical Record Number
  - c. Unit/room number
  - d. Age
  - e. Weight
  - f. Gender
  - g. Allergies
  - h. Admit date
  - e. Attending physician – Phone numbers of covering physician
2. History and Problem List
  - a. Primary diagnosis(es)
  - b. Chronic problems (pertinent to this admission/shift)
3. Current condition/status
4. System based

- a. Pertinent Medications and Treatments
- b. Oral and IV medications
- c. IV fluids
- d. Blood products
- e. Oxygen
- f. Respiratory therapy interventions
5. Pertinent lab data
6. To do list: Check x-ray, labs, wean treatments, etc - rationale
7. Contingency Planning – What may go wrong and what to do
8. **ANTICIPATE** what will happen to your patient. Ex:  
*“If patient seizes > 5 minutes, give him Ativan 0.05mg/kg. If he still seizes load him with 5mg/kg of fosphenytoin.”*
9. Code status/family situations
10. Difficult family or psychosocial situations
11. Code status, especially recent changes or family discussions

This information is found on pocket cards delivered to each house officer. The process by which this information is distributed is via Core Modules and Orientation presentations to residents and via a Compliance Module for faculty. In addition this information is presented in program/departmental meetings.

#### Special Considerations for the A/I Fellowship:

Having completed an ACGME residency training program prior to acceptance in the A/I fellowship program, it is expected that trainees are well-versed in effective transitions. The small size and close-knit nature of the A/I fellowship promotes excellence in the transition of care, as all members of the division are usually familiar with active/complex patients. Moreover there is typically a one-on-one relationship between the fellow who received “sign-out” for the transition of care of patients and the A/I attending on call (who is familiar with the patients as a rule). Therefore, the effectiveness and thoroughness of the transitions are continuously sampled and monitored, ensuring that key elements are transmitted and have been understood.

Transition of patient care usually takes place on Friday, when the fellow(s) on call for the weekend assume care of active inpatients and/or consult patients. “Sign-out” of these patients occurs in the A/I office at CHNOLA, face to face between the fellow coming off call during the week, and the fellow taking call for the weekend. The A/I faculty may also be involved in the transition of care and discussion of any plans for the patients for the weekend. Prior to leaving for the weekend, the fellow on call discusses the cases with the attending. Therefore, the faculty on call (who knows the active patients) monitors the accuracy and efficacy of the transition.

Formal monitoring of the transition process is described below.

How monitored:

Faculty are required to answer a question on effectiveness of witnessed transitions on each evaluation. The process and effectiveness of each program's system is monitored through the Annual Program Review and the Internal Review process. The institution and program will monitor this by periodic sampling of transitions, as part of the Annual Review of Programs and as part of the Internal Review process.

### **Policy on Alertness Management / Fatigue Mitigation Strategies**

#### Policy and Process:

Residents and faculty are educated about alertness management and fatigue mitigation strategies via on line modules and in departmental conferences. Alertness management and fatigue management strategies are outlined on the pocket cards distributed to all residents and contain the following suggestions:

1. Warning Signs
  - a. Falling asleep at Conference/Rounds
  - b. Restless, Irritable w/ Staff, Colleagues, Family
  - c. Rechecking your work constantly
  - d. Difficulty Focusing on Care of the Patient
  - e. Feeling Like you Just Don't Care
  - f. . Never drive while drowsy
2. SLEEP STRATEGIES FOR HOUSESTAFF
  - a. Pre-call Residents
    1. Don't start Call w/a SLEEP DEFICIT – GET 7-9 ° of sleep
    2. Avoid Heavy Meals / exercise w/in 3° of sleep
    3. Avoid Stimulants to keep you up
    4. Avoid ETOH to help you sleep
  - b. ON Call Residents
    1. Tell Chief/PD/Faculty, if too sleepy to work!
    2. Nap whenever you can > 30 min or < 2°)
    3. BEST Circadian Window 2PM-5PM & 2AM- 5AM
    4. AVOID Heavy Meal
    5. Strategic Consumption of Coffee (t ½ 3-7 hours)
    6. Know your own alertness/Sleep Pattern!
  - c. Post Call Residents
    1. Lowest Alertness 6AM –11AM after being up all night
    2. Full Recovery from Sleep Deficit takes 2 nights
    3. Take 20 min. nap or Cup Coffee 30 min before Driving

In addition programs will employ back up call schedules as needed in the event a resident can't complete an assigned duty period.

#### How Monitored:

The institution and program monitor successful completion of the on line modules. Residents are

encouraged to discuss any issues related to fatigue and alertness with supervisory residents, chief residents and the program administration. Supervisory residents will monitor lower level residents during any in house call periods for signs of fatigue. Adequate facilities for sleep during day and night periods are available at all rotation sites and residents are required to notify Chief Residents and programs if those facilities are not available as needed or properly maintained. At all transition periods supervisory residents and faculty will monitor lower level residents for signs of fatigue during the hand off. The institution will monitor implementation of this indirectly via monitoring of duty hours violations in New Innovations, the Annual Resident Survey administered by the institution to all residents and as part of the annual review of programs and the Internal Review process.

### **Supervision and Progressive Responsibility Policy**

#### **Policy and Process:**

Several of the essential elements of supervision are contained in the Policy of Professionalism detailed elsewhere in this document. The specific policies for supervision are as follows.

#### **Faculty Responsibilities for Supervision and Graded Responsibility:**

Residents must be supervised in such a way that they assume progressive responsibility as they progress in their educational program. Progressive responsibility is determined in a number of ways including:

1. GME faculty on each service determine what level of autonomy each resident may have that ensures growth of the resident and patient safety.
2. The Program Director and Chief Residents assess each residents level of competence in frequent personal observation and semi-annual review of each resident.
3. Where applicable progressive responsibility is based on specific milestones.

The expected components of supervision include:

1. Defining educational objectives.
2. The faculty assessing the skill level of the resident by direct observation.
3. The faculty defines the course of progressive responsibility allowed starting with close supervision and progressing to independence as the skill is mastered.
4. Documentation of supervision by the involved supervising faculty must be customized to the settings based on guidelines for best practice and regulations from the ACGME, JACHO and other regulatory bodies. Documentation should generally include but not be limited to:
  - a. progress notes in the chart written by or signed by the faculty.
  - b. addendum to resident's notes where needed.
  - c. counter-signature of notes by faculty.
  - d. a medical record entry indicating the name of the supervisory faculty.

5. In addition to close observation, faculty are encouraged to give frequent formative feedback and required to give formal summative written feedback that is competency based and includes evaluation of both professionalism and effectiveness of transitions.

Special Considerations for the A/I Fellowship Program:

For the A/I Fellowship program, the program director is required to document additional evaluations (separate from Institutional/ACGME evaluations) on the ABAI website. These evaluations are documented for 6, 12, 18 and 24 months of the training period. Additionally, the fellows attainment of procedural competence is also recorded. The date where the fellow has attained this competence is recorded, indicating his/her ability to perform the procedures required by the ACGME/ABAI independently.

The “Line of Supervision” of fellows is described in narrative detail above.

**The levels of supervision are defined as follows:**

**Direct Supervision by Faculty** - faculty is physically present with the resident being supervised.

**Direct Supervision by Senior Resident** – same as above but resident is supervisor.

**Indirect with Direct Supervision IMMEDIATELY Available – Faculty** – the supervising physician is physically present within the hospital or other site of patient care and is **immediately** available to provide Direct Supervision.

**Indirect with Direct Supervision IMMEDIATELY Available – Resident** - same but supervisor is resident.

**Indirect with Direct Supervision Available** - the supervising physician is not physically present within the hospital or other site of patient care, but is immediately available by means of telephonic and/or electronic modalities, and is available to provide Direct Supervision.

**Oversight** – The supervising physician is available to provide review of procedures/encounters with feedback provided after care is delivered.

Throughout the 2 year fellowship training period, the A/I fellow experiences increasing responsibility. More direct supervision is given by the attending physicians in the first months of fellowship, whereas at the end of the fellowship training the fellows experience more oversight from the responsible attending. That being said, the level of supervisions/oversight described below varies according to the complexity of the patient. For example, routine consultations within the hospital for non-urgent issues may only require indirect supervision of the fellow (prior to inpatient rounds where the attending physically sees and examines every patient).

Complex/urgent consultations from the ICU setting or other cases in which patients are critically ill may require direct supervision and concurrent evaluation by the attending alongside the fellow.

## **THE LEVEL OF OVERSIGHT IN THE A/I Fellowship**

### **Inpatient/Consult Services**

<i>PGY</i>	<i>Direct by Faculty</i>	<i>Direct by senior residents</i>	<i>Indirect but /immediately available - faculty</i>	<i>Indirect available</i>	<i>Oversight</i>
<b>IV</b>	<b>XXX</b>	<b>XXX</b>	<b>XXX</b>	<b>XXX</b>	
<b>V</b>	<b>XXX</b>		<b>XXX</b>	<b>XXX</b>	<b>XXX</b>

### **Intensive Care Units**

<i>PGY</i>	<i>Direct by Faculty</i>	<i>Direct by senior residents</i>	<i>Indirect but immediately available - faculty</i>	<i>Indirect available</i>	<i>Oversight</i>
<b>IV</b>	<b>XXX</b>	<b>XXX</b>	<b>XXX</b>	<b>XXX</b>	
<b>V</b>	<b>XXX</b>		<b>XXX</b>	<b>XXX</b>	<b>XXX</b>

### **Ambulatory Settings**

<i>PGY</i>	<i>Direct by Faculty</i>	<i>Direct by senior residents</i>	<i>Indirect but immediately available - faculty</i>	<i>Indirect available</i>	<i>Oversight</i>
<b>IV</b>	<b>XXX</b>	<b>XXX</b>	<b>XXX</b>		
<b>V</b>	<b>XXX</b>		<b>XXX</b>		<b>XXX</b>

### **AT HOME CALL**

<i>PGY</i>	<i>Direct by Faculty</i>	<i>Direct by senior residents</i>	<i>Indirect but /immediately available - faculty</i>	<i>Indirect available</i>	<i>Oversight</i>
<b>IV</b>				<b>XXX</b>	<b>XXX</b>

V				XXX	XXX
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**Policy on Mandatory Notification of Faculty**

**Policy and Process**

In certain cases faculty must be notified of a change in patient status or condition . the table below outlines those instances in which faculty must be called by PGY level.

<b>Condition</b>	<b>PGY 3 and above</b>
Care of complex patient	X
Transfer to ICU	X
DNR or other end of life decision	X
Emergency surgery	X
Acute drastic change in course	X
Unanticipated invasive or diagnostic procedure	X

**How monitored**

Faculty and programs will monitor by checking for proper implementation on daily rounds and other venues as well as solicitation of reports from faculty on lack of appropriate use of the policy.

**Policy on residents staying longer than 24+4**

**Policy and Process**

This policy is unlikely to affect the A/I fellowship, as we do not take in-house call. However, in the unlikely event that a resident is required to stay for 24 hours on duty, the policy below will be followed.

Upper level residents are not allowed to stay longer than 24 hours with 4 hours for transitions. In those rare and extenuating cases where a resident absolutely must remain after 24+4 the resident must contact the Program Director for a specific exemption. If that is permitted verbally then the resident must communicate by email with the Program Director telling:

1. the patient identifying information for which they are remaining,
2. the specific reason they must remain longer than 24+4 ,
3. assurance that **all** other patient care matters have been assigned to other members of the team,
4. assurance that the resident will not be involved in any other matter than that for which the exemption is allowed and
5. assurance that the resident will notify the program director when they are complete and leaving.

In the event that the Program Director does not hear from the resident in a reasonable time, the Program Director or designee will locate the resident in person and assess the need for any further attendance by the resident. Residents caught in violation of this policy or who abuse this rare privilege will be subject to disciplinary action for unprofessional behavior.

**How Monitored:**

The program director will directly monitor each of these cases. It is anticipated these requests will be infrequent at most. The Program Director will collect and review the written requests on a regular basis on each case and all cases in aggregate. The institution will monitor numbers and types of exceptions of this during annual reviews of programs and Internal Reviews.

**ASSURANCE OF INFORMING PATIENTS REGARDING RESIDENT ROLE**

Fellows in the A/I program have completed a 3year residency in either Pediatrics or IM, and therefore are expected to be familiar with the need to inform patients regarding their role in medical care. Nonetheless, at each patient encounter, fellows are required to

1. Introduce themselves by name
2. Inform the patient of their role in the A/I team
3. Discuss the oversight or supervision of their care by the A/I attending.

**Duty Hours and Fellow Moonlighting Policy (also refer to House Officer’s Agreement of Appointment)**

The institution through GMEC supports the spirit and letter of the ACGME Duty Hour Requirements as set forth in the Common Program Requirements and related documents July 1, 2003 and subsequent modifications. Though learning occurs in part through clinical service, the training programs are primarily educational. As such, work requirements including patient care, educational activities, administrative duties, and moonlighting should not prevent adequate rest. The institution supports the physical and emotional well being of the resident as a necessity for professional and personal development and to guarantee patient safety. The institution will develop and implement policies and procedures through GMEC to assure the specific ACGME policies relating to duty hours are successfully implemented and monitored. These policies may be summarized as:

**Maximum House of Work Per Week**

Duty hours must be limited to 80 hours per week, averaged over a four week period, inclusive of all in-house call activities and all moonlighting.

**Mandatory Time Free of Duty**

Residents must be scheduled for a minimum of one day free of duty every week (when averaged over four weeks). At-home call cannot be assigned on these free days.

## Maximum Duty Period Length

Duty periods of PGY-1 residents must not exceed 16 hours in duration.

Duty periods of PGY-2 residents and above may be scheduled to a maximum of 24 hours of continuous duty in the hospital. Programs must encourage residents to use alertness management strategies in the context of patient care responsibilities. Strategic napping, especially after 16 hours of continuous duty and between the hours of 10:00 p.m. and 8:00 a.m., is strongly suggested.

It is essential for patient safety and resident education that effective transitions in care occur. Residents may be allowed to remain on-site in order to accomplish these tasks; however, this period of time must be no longer than an additional four hours.

Residents must not be assigned additional clinical responsibilities after 24 hours of continuous in-house duty.

In unusual circumstances, residents, on their own initiative, may remain beyond their scheduled period of duty to continue to provide care to a single patient. Justifications for such extensions of duty are limited to reasons of required continuity for a severely ill or unstable patient, academic importance of the events transpiring, or humanistic attention to the needs of a patient or family.

Under those circumstances, the resident must:

appropriately hand over the care of all other patients to the team responsible for their continuing care; and,

document the reasons for remaining to care for the patient in question and submit that documentation in every circumstance to the program director.

The program director must review each submission of additional service, and track both individual resident and program-wide episodes of additional duty.

## Minimum Time Off between Scheduled Duty Periods

PGY-1 resident should have 10 hours, and must have eight hours, free of duty between scheduled duty periods.

Intermediate-level residents [as defined by the Review Committee] should have 10 hours free of duty, and must have eight hours between scheduled duty periods. They must have at least 14 hours free of duty after 24 hours of in-house duty.

Residents in the final years of education [as defined by the Review Committee] must be prepared to enter the unsupervised practice of medicine and care for patients over

irregular or extended periods.

This preparation must occur within the context of the 80-hour, maximum duty period length, and one-day-off-in seven standards. While it is desirable that residents in their final years of education have eight hours free of duty between scheduled duty periods, there may be circumstances [as defined by the Review Committee] when these residents must stay on duty to care for their patients or return to the hospital with fewer than eight hours free of duty.

Circumstances or return-to-hospital activities with fewer than eight hours away from the hospital by residents in their final years of education must be monitored by the program director.

#### Maximum Frequency of In-House Night Float

Residents must not be scheduled for more than six consecutive nights of night float. [The maximum number of consecutive weeks of night float, and maximum number of months of night float per year may be further specified by the Review Committee.]

#### Maximum In-House On-Call Frequency

PGY-2 residents and above must be scheduled for in-house call no more frequently than every-third-night (when averaged over a four-week period).

#### At-Home Call

Time spent in the hospital by residents on at-home call must count towards the 80-hours maximum weekly hour limit. The frequency of at-home call is not subject to the every-third-night limitation, but must satisfy the requirement for on-day-in-seven free of duty, when averaged over four weeks.

At-home call must not be as frequent or taxing as to preclude rest or reasonable personal time for each resident.

Residents are permitted to return to the hospital while on at-home call to care for new or established patients. Each episode of this type of care, while it must be included in the 80-hour weekly maximum, will not initiate a new “off-duty period”.

Residents are required to log all duty hours in New Innovations Software Program or its replacement program. Those who fail to log duty hours or log erroneous duty hours are subject to disciplinary action.

The institution as well as each program is required to monitor and document compliance with these requirements for all trainees. This policy applies to every site where trainees rotate.

### Policy on MOONLIGHTING

Professional activity outside of the scope of the House Officer Program, which includes volunteer work or service in a clinical setting, or employment that is not required by the House Officer Program (moonlighting) shall not jeopardize any training program of the University, compromise the value of the House Officer's education experience, or interfere in any way with the responsibilities, duties and assignments of the House Officer Program. It is within the sole discretion of each Department Head and/or Program Director to determine whether outside activities interfere with the responsibilities, duties and assignments of the House Officer Program. House Officers must not be required to moonlight. Before engaging in activity outside the scope of the House Officer Program, House Officers must receive the written approval of the Department Head and/or Program Director of the nature, duration and location of the outside activity. (revised 4/2001) All moonlighting activities must be tracked in New Innovations Software Program. PGY1's may not moonlight. All internal and external moonlighting must be counted in the 80 hour maximum weekly hour limit. Resident must not schedule moonlighting that will cause the 80 hour maximum. Residents who schedule moonlighting activities resulting in violation of the 80 hour work rule will be subject to disciplinary action including but not limited to loss of moonlighting privileges.(revised 2/17/2011) The house officers' performance will be monitored for the effect of these moonlighting activities upon performance and that adverse effects may lead to withdrawal of permission to continue. All documentation will be kept in the house officer's program file. (revised 7/1/2005)

House Officers, while engaged in professional activities outside the scope of the House Officer Program, are not provided professional liability coverage under LSA-R.S. 40:1299.39 et seq., unless the professional services are performed at a public charity health care facility. A House Officer providing services outside the scope of the House Officer Program shall warrant to University that the House Officer is and will remain insured during the term of any outside professional activities, either (1) insured against claims of professional liability under one or more policies of insurance with indemnity limits of not less than \$500,000 per occurrence and \$1,000,000 in the aggregate annually; or (2) duly qualified and enrolled as a health care provider with the Louisiana Patient's Compensation Fund pursuant to the Louisiana Medical Malpractice Act, LSA-R.S. 40:1299.41 et seq. or (3) that the House Officer is provided such coverage by the person or entity who has engaged the House Officer to provide the outside professional services.

House Officers shall not provide outside professional activities to any other state agency (e.g., Department of Health and Hospitals, Department of Public Safety and Corrections, Office of Mental Health, etc.) by means of a contract directly between the House Officer and the other state agency. Should a House Officer desire to provide outside professional services to another state agency, the contract must be between the LSU School of Medicine in New Orleans and the other state agency for the House Officer's services, and the House Officer will receive additional compensation through the LSU payroll system. House Officers should speak with the Departmental Business Administrator of the House Officer Program to arrange such a contract.

House Officers may not moonlight at any site without a full and unrestricted license. Occasional exceptions may be granted by the LSBME only after a specific request by a program and are largely limited to moonlighting which is in the same institution as the program, is under the supervision of program faculty and similar to activity the trainee might have in the program. In addition, residents on J-1 visas may not moonlight (revised 1/2008).

The LA State Board and the DEA will independently investigate and prosecute individual residents if they so desire regarding the following:

To moonlight all house officers must be fully licensed and have their own malpractice and DEA number.

Moonlighting in pain and weight loss clinics is not allowed by the LSBME.

Pre-signing prescriptions is illegal.

Using MCLNO prescriptions outside MCLNO is prohibited – your “MCLNO” number is site specific.

Don't ever sign anything saying you saw a patient if you didn't see the patient

All narcotics prescriptions must be put in the patient's name and address plus the date don't "let the nurse do it"

House officers are held accountable for things all things signed - read the fine print

Follow accepted practice guidelines for everything especially weight loss and pain patients

All house officers should be cognizant of Medicare fraud and abuse guidelines.

## **Policy Ensuring Residents Have Adequate Rest**

In order to ensure residents have adequate rest between duty periods and after on-call sessions we adopt the following policies:

1. Our Duty Hours Policy contains the following relevant language:

a. PGY-1 resident should have 10 hours, and must have eight hours, free of duty between scheduled duty periods.

b. Intermediate-level residents [as defined by the Review Committee] should have 10 hours free of duty, and must have eight hours between scheduled duty periods. They must have at least 14 hours free of duty after 24 hours of in-house duty.

c. Residents in the final years of education [as defined by the Review Committee] must be prepared to enter the unsupervised practice of medicine and care for patients over irregular or extended periods. This preparation must occur within the context of the 80-hour, maximum duty period length, and one-day-off-in seven standards. While it is desirable that residents in their final years of education have eight hours free of duty between scheduled duty periods, there may be circumstances [as defined by the Review Committee] when these residents must stay on duty to care for their patients or return to the hospital with fewer than eight hours free of duty.

1. Circumstances or return-to-hospital activities with fewer than eight hours away from the hospital by residents in their final years of education must be monitored by the program director.

All of this is in the context of the other duty hours requirements.

2. All employees of LSUHSC are under **Chancellors Memorandum 37** which is the LSHSC Fitness for Duty Policy. This describes the expectations for employees to report to work fit and safe to work. It further defines what are considered unsafe/impaired behaviors, the requirement for self or supervisor referral to the Campus Assistance Program, and what steps are taken thereafter.

3. The institutional policy of Professionalism and Learning Environment further amplifies the expectations for residents to be fit for duty and to take it upon themselves to be well rested with the following language:

Residents must take personal responsibility for and faculty must model behaviors that promote:

1. Assurance for fitness of duty.
2. Assurance of the safety and welfare of patients entrusted in their care.
3. Management of their time before, during and after clinical assignments.
4. Recognition of impairment (e.g. illness or fatigue ) in self and peers.
5. Honest and accurate reporting of duty hours, patient outcomes and clinical experience data.

4. The moonlighting policy anticipates potential trouble areas and describes a method for monitoring the effects of moonlighting on residents.

5. Adequate sleep facilities are in place at each institution and our alertness management / fatigue mitigation policy and process encourages good sleep hygiene as well as recommending such strategies and pre-call strategies, strategic napping and post-call naps.

6. Foremost our Professionalism and Learning Environment Policy requires faculty to model behaviors that encourage fitness for duty as noted above and our Supervision Policy requires faculty to observe for signs of fatigue especially during transitions.

**IX. Employment-Related Policies (see House Officer Agreement of Appointment)**

1. Compensation, Insurance
2. Vacation & Leave Policy
3. Drug Prevention
4. Physician Impairment
5. Cancellation and Renewal of Agreement of Appointment
6. Summary Suspension
7. Grievance Procedures

**X. Institutional Guidelines**

All institutional guidelines (as outlined in the LSU School of Medicine House Officer Manual) must be followed for salary, benefits, sickleave and all other aspects of residency at LSUHSC.