

ACGME Program Requirements for Graduate Medical Education in Allergy and Immunology

Common Program Requirements are in **BOLD**

Effective: July 1, 2007

Introduction

Int.A. Residency is an essential dimension of the transformation of the medical student to the independent practitioner along the continuum of medical education. It is physically, emotionally, and intellectually demanding, and requires longitudinally-concentrated effort on the part of the resident.

The specialty education of physicians to practice independently is experiential, and necessarily occurs within the context of the health care delivery system. Developing the skills, knowledge, and attitudes leading to proficiency in all the domains of clinical competency requires the resident physician to assume personal responsibility for the care of individual patients. For the resident, the essential learning activity is interaction with patients under the guidance and supervision of faculty members who give value, context, and meaning to those interactions. As residents gain experience and demonstrate growth in their ability to care for patients, they assume roles that permit them to exercise those skills with greater independence. This concept—graded and progressive responsibility—is one of the core tenets of American graduate medical education. Supervision in the setting of graduate medical education has the goals of assuring the provision of safe and effective care to the individual patient; assuring each resident’s development of the skills, knowledge, and attitudes required to enter the unsupervised practice of medicine; and establishing a foundation for continued professional growth.

Int.B. Definition and Scope of the Specialty

Int.B.1. Graduate medical education programs in allergy and immunology should prepare specialists to provide expert medical care for patients with allergic and immunologic disorders. These specialists may serve as consultants, educators, and physician scientists in asthma, allergic disorders, immunologic disorders, and immunodeficiency diseases.

Int.B.2. Residents in this specialty have specific competencies in the care of patients of all ages.

Int.C. Duration and Scope of Education

Int.C.1. Residents admitted to allergy and immunology programs should have successfully completed a program in internal medicine or pediatrics accredited by the Accreditation Council for Graduate Medical Education (ACGME).

- Int.C.2. The length of the educational program is 24 months of full-time education. Before entry into the program, each resident must be notified in writing of the required length of the allergy and immunology educational program.
- Int.C.3. Residents must demonstrate competencies in treating children and adults with asthma, allergic disorders, immunologic disorders, and immunodeficiency diseases.
- Int.C.4. Residents must satisfy the requirements for program completion with 24 months of education. The Review Committee recognizes this may be accomplished in two ways: 24 consecutive months of education, or time spread out over 36 months that includes a total of 24 months of allergy and immunology education. The program must meet the requirements outlined in section IV.
- Int.C.5. If an extension of more than three months in the educational program is necessary, the program director must notify the Review Committee of the extension. The program director must describe the proposed curriculum for that resident and the measures taken to minimize the impact on other residents. Any changes in rotation schedules should be included in the notification. Express permission must be obtained in advance from the Review Committee if the extension is greater than three months.
- Int.C.6. The program format should be as follows:
- Int.C.6.a) 50% of the program must be devoted to direct patient care activities;
- Int.C.6.b) 25% of the program must be devoted to scholarly activities and research; and,
- Int.C.6.c) 25% of the program must be devoted to other educational activities.

I. Institutions

I.A. Sponsoring Institution

One sponsoring institution must assume ultimate responsibility for the program, as described in the Institutional Requirements, and this responsibility extends to resident assignments at all participating sites.

The sponsoring institution and the program must ensure that the program director has sufficient protected time and financial support for his or her educational and administrative responsibilities to the program.

- I.A.1. Allergy and immunology programs should be conducted principally in institutions with ACGME-accredited graduate medical education programs in both pediatrics and internal medicine. Programs may be based in institutions with ACGME-accredited internal medicine or pediatrics training programs that collaborate with participating institutions

that have accredited GME programs in other relevant specialties.

- I.A.2. The sponsoring institution must ensure sufficient faculty, financial resources, clinical resources, research opportunities, and library facilities to meet the residents' educational needs and to enable the program to comply with accreditation requirements.

I.B. Participating Sites

- I.B.1. There must be a program letter of agreement (PLA) between the program and each participating site providing a required assignment. The PLA must be renewed at least every five years.**

The PLA should:

- I.B.1.a) **identify the faculty who will assume both educational and supervisory responsibilities for residents;**
- I.B.1.b) **specify their responsibilities for teaching, supervision, and formal evaluation of residents, as specified later in this document;**
- I.B.1.c) **specify the duration and content of the educational experience; and,**
- I.B.1.d) **state the policies and procedures that will govern resident education during the assignment.**
- I.B.1.e) outline the educational goals and objectives to be attained by the resident during the assignment.

- I.B.2. The program director must submit any additions or deletions of participating sites routinely providing an educational experience, required for all residents, of one month full time equivalent (FTE) or more through the Accreditation Council for Graduate Medical Education (ACGME Accreditation Data System (ADS)).**

- I.B.3. Assignments at participating sites must be of sufficient length to ensure a quality educational experience and should provide sufficient opportunity for continuity of care. All participating institutions must demonstrate the ability to promote the program goals and educational and peer activities. Exceptions must be justified and approved in advance.

- I.B.4. Resident education at a private practitioner's office:

- I.B.4.a) must emphasize that the resident is gaining an educational experience, not providing service to the office. The goals, objectives and manner of supervision must be documented;
- I.B.4.b) should be one that cannot be met in any other participating institution; and,

I.B.4.c) requires that the participating private office practitioner be listed on the Program Information Form (PIF) as a member of the faculty.

II. Program Personnel and Resources

II.A. Program Director

II.A.1. There must be a single program director with authority and accountability for the operation of the program. The sponsoring institution's GMEC must approve a change in program director. After approval, the program director must submit this change to the ACGME via the ADS.

II.A.2. The program director should continue in his or her position for a length of time adequate to maintain continuity of leadership and program stability.

II.A.3. Qualifications of the program director must include:

II.A.3.a) requisite specialty expertise and documented educational and administrative experience acceptable to the Review Committee;

II.A.3.b) current certification in the specialty by the American Board of Allergy and Immunology, or specialty qualifications that are acceptable to the Review Committee; and,

II.A.3.c) current medical licensure and appropriate medical staff appointment.

II.A.3.d) at least three years of participation as an active faculty member in an ACGME-accredited allergy and immunology program or possess qualifications acceptable to the Review Committee;

II.A.3.e) leadership qualities and sufficient time and effort devoted to the program to provide day-to-day continuity of leadership and to fulfill all of the responsibilities of meeting the educational goals of the program; and,

II.A.3.f) a valid unrestricted license to practice medicine in the state where the program's institutional sponsor is located. Program directors in certain federal programs are exempted from the requirement to be licensed in the sponsoring institution's state.

II.A.4. The program director must administer and maintain an educational environment conducive to educating the residents in each of the ACGME competency areas. The program director must:

II.A.4.a) oversee and ensure the quality of didactic and clinical

- education in all institutions that participate in the program;
- II.A.4.b)** approve a local director at each participating site who is accountable for resident education;
- II.A.4.c)** approve the selection of program faculty as appropriate;
- II.A.4.d)** evaluate program faculty and approve the continued participation of program faculty based on evaluation;
- II.A.4.e)** monitor resident supervision at all participating sites;
- II.A.4.f)** prepare and submit all information required and requested by the ACGME, including but not limited to the program information forms and annual program resident updates to the ADS, and ensure that the information submitted is accurate and complete;
- II.A.4.g)** provide each resident with documented semiannual evaluation of performance with feedback;
- II.A.4.h)** ensure compliance with grievance and due process procedures as set forth in the Institutional Requirements and implemented by the sponsoring institution;
- II.A.4.i)** provide verification of residency education for all residents, including those who leave the program prior to completion;
- II.A.4.j)** implement policies and procedures consistent with the institutional and program requirements for resident duty hours and the working environment, including moonlighting, and, to that end, must:
- II.A.4.j).(1)** distribute these policies and procedures to the residents and faculty;
- II.A.4.j).(2)** monitor resident duty hours, according to sponsoring institutional policies, with a frequency sufficient to ensure compliance with ACGME requirements;
- II.A.4.j).(3)** adjust schedules as necessary to mitigate excessive service demands and/or fatigue; and,
- II.A.4.j).(4)** if applicable, monitor the demands of at-home call and adjust schedules as necessary to mitigate excessive service demands and/or fatigue.
- II.A.4.k)** monitor the need for and ensure the provision of back up support systems when patient care responsibilities are unusually difficult or prolonged;

- II.A.4.l)** comply with the sponsoring institution's written policies and procedures, including those specified in the Institutional Requirements, for selection, evaluation and promotion of residents, disciplinary action, and supervision of residents;
- II.A.4.m)** be familiar with and comply with ACGME and Review Committee policies and procedures as outlined in the ACGME Manual of Policies and Procedures;
- II.A.4.n)** obtain review and approval of the sponsoring institution's GMC/DIO before submitting to the ACGME information or requests for the following:
 - II.A.4.n).(1)** all applications for ACGME accreditation of new programs;
 - II.A.4.n).(2)** changes in resident complement;
 - II.A.4.n).(3)** major changes in program structure or length of training;
 - II.A.4.n).(4)** progress reports requested by the RC;
 - II.A.4.n).(5)** responses to all proposed adverse actions;
 - II.A.4.n).(6)** requests for increases or any change to resident duty hours;
 - II.A.4.n).(7)** voluntary withdrawals of ACGME-accredited programs;
 - II.A.4.n).(8)** requests for appeal of an adverse action;
 - II.A.4.n).(9)** appeal presentations to a Board of Appeal or the ACGME; and,
 - II.A.4.n).(10)** proposals to ACGME for approval of innovative educational approaches.
- II.A.4.o)** obtain DIO review and co-signature on all program information forms, as well as any correspondence or document submitted to the ACGME that addresses:
 - II.A.4.o).(1)** program citations, and/or
 - II.A.4.o).(2)** request for changes in the program that would have significant impact, including financial, on the program or institution.
- II.A.4.p)** be responsible for ongoing communications with the American Board of Allergy and Immunology. This includes completing

interim and final evaluations;

II.A.4.q) ensure that residents have formal instruction and, clinical experience with, as well as demonstrate proficiency in, the following procedures. These procedures must be entered into the ACGME Resident Case Log System:

- II.A.4.q).(1) Allergen immunotherapy
- II.A.4.q).(2) Drug desensitization and challenge
- II.A.4.q).(3) Immediate hypersensitivity skin testing
- II.A.4.q).(4) IVIG treatment and administration
- II.A.4.q).(5) Pulmonary function tests
- II.A.4.q).(6) Physical urticaria testing
- II.A.4.q).(7) Food challenge testing

II.A.4.r) ensure that residents have proficiency with the following procedures:

- II.A.4.r).(1) Delayed hypersensitivity skin testing
- II.A.4.r).(2) Provocation testing for hyper-reactive airways
- II.A.4.r).(3) Nasal cytology
- II.A.4.r).(4) Patch testing
- II.A.4.r).(5) Rhinolaryngoscopy

II.B. Faculty

II.B.1. At each participating site, there must be a sufficient number of faculty with documented qualifications to instruct and supervise all residents at that location.

The faculty must:

II.B.1.a) devote sufficient time to the educational program to fulfill their supervisory and teaching responsibilities; and to demonstrate a strong interest in the education of residents, and

II.B.1.b) administer and maintain an educational environment conducive to educating residents in each of the ACGME competency areas.

II.B.2. The physician faculty must have current certification in the specialty by the American Board of Allergy and Immunology, or possess qualifications acceptable to the Review Committee.

The faculty must include:

II.B.2.a) qualified allergist(s) and immunologist(s) having residency training in internal medicine, and who are assigned to a participating site;

II.B.2.b) qualified allergist(s) and immunologist(s) having residency training in pediatrics, and who are assigned to a participating site;

II.B.2.b).(1) a faculty member who is residency trained in both internal medicine and pediatrics may fulfill the requirements in either Section II.B.2.a) or II.B.2.b).

II.B.3. The physician faculty must possess current medical licensure and appropriate medical staff appointment.

II.B.4. The nonphysician faculty must have appropriate qualifications in their field and hold appropriate institutional appointments.

II.B.5. The faculty must establish and maintain an environment of inquiry and scholarship with an active research component.

II.B.5.a) The faculty must regularly participate in organized clinical discussions, rounds, journal clubs, and conferences.

II.B.5.b) Some members of the faculty should also demonstrate scholarship by one or more of the following:

II.B.5.b).(1) peer-reviewed funding;

II.B.5.b).(2) publication of original research or review articles in peer-reviewed journals, or chapters in textbooks;

II.B.5.b).(3) publication or presentation of case reports or clinical series at local, regional, or national professional and scientific society meetings; or,

II.B.5.b).(4) participation in national committees or educational organizations.

II.B.5.c) Faculty should encourage and support residents in scholarly activities.

II.B.6. Each program must have at least two key clinical faculty.

II.B.7. All regularly participating faculty must be included in the PIF, with delineation of the number of hours spent in the education program.

- II.B.8. The faculty must demonstrate competence in both clinical care and teaching abilities.
- II.B.9. Non allergy immunology specialist faculty must be certified in their specialty or have equivalent qualifications.
- II.B.10. The faculty must actively pursue scholarly activity in allergy and immunology and encourage residents to engage in scholarly activity.
- II.B.11. One outcome measure of the quality of a residency program is the performance of its graduates on the certifying examinations of the American Board of Allergy and Immunology. In its evaluation of residency programs, the Review Committee will take into consideration the information provided by the American Board of Allergy and Immunology regarding resident performance on the certifying examinations. A program will be judged deficient if a program's pass rate is significantly below the national average over a five-year period.

II.C. Other Program Personnel

The institution and the program must jointly ensure the availability of all necessary professional, technical, and clerical personnel for the effective administration of the program.

- II.C.1. All other program faculty, such as healthcare providers and scientists, must be appropriately qualified in their area of expertise.

II.D. Resources

The institution and the program must jointly ensure the availability of adequate resources for resident education, as defined in the specialty program requirements.

- II.D.1. The program must provide a sufficient number of pediatric and adult patients to provide education in asthma, allergic disorders, immunologic disorders, and immunodeficiency diseases.
- II.D.2. A sufficient number of adult and pediatric ambulatory patients must be provided for each resident during the 24-month program.

II.E. Medical Information Access

Residents must have ready access to specialty-specific and other appropriate reference material in print or electronic format. Electronic medical literature databases with search capabilities should be available.

III. Resident Appointments

III.A. Eligibility Criteria

The program director must comply with the criteria for resident eligibility

as specified in the Institutional Requirements.

III.B. Number of Residents

The program director may not appoint more residents than approved by the Review Committee, unless otherwise stated in the specialty-specific requirements. The program's educational resources must be adequate to support the number of residents appointed to the program.

- III.B.1. The Review Committee for Allergy and Immunology does not approve a specific number of resident positions. At the time of program review, the Committee will judge the adequacy of the program's resources to support the number of resident positions proposed.

III.C. Resident Transfers

- III.C.1. **Before accepting a resident who is transferring from another program, the program director must obtain written or electronic verification of previous educational experiences and a summative competency-based performance evaluation of the transferring resident.**

- III.C.2. **A program director must provide timely verification of residency education and summative performance evaluations for residents who leave the program prior to completion.**

- III.C.3. Resident transfers must be reported to the Review Committee and the American Board of Allergy and Immunology. The transfer document should include an assessment of competencies in the six areas described in Section IV.5.

III.D. Appointment of Fellows and Other Learners

The presence of other learners (including, but not limited to, residents from other specialties, subspecialty fellows, PhD students, and nurse practitioners) in the program must not interfere with the appointed residents' education. The program director must report the presence of other learners to the DIO and GMEC in accordance with sponsoring institution guidelines.

IV. Educational Program

- IV.A. **The curriculum must contain the following educational components:**

- IV.A.1. **Overall educational goals for the program, which the program must distribute to residents and faculty annually;**

- IV.A.2. **Competency-based goals and objectives for each assignment at each educational level, which the program must distribute to residents and faculty annually, in either written or electronic form. These should be reviewed by the resident at the start of each**

rotation;

IV.A.3. Regularly scheduled didactic sessions;

IV.A.4. Delineation of resident responsibilities for patient care, progressive responsibility for patient management, and supervision of residents over the continuum of the program; and,

IV.A.5. ACGME Competencies

The program must integrate the following ACGME competencies into the curriculum:

IV.A.5.a) Patient Care

Residents must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health. Residents:

IV.A.5.a).(1) must study asthma, allergic disorders, immunologic disorders, and immunodeficiency diseases. All residents must be provided with opportunities to apply immunologic theories, principles, and techniques to the investigation, diagnosis, and treatment of a broad spectrum of allergic and immunologic diseases. The clinical education program requires supervised patient care; rotations through cooperating services; attendance at conferences, lectures, journal clubs, or seminars; and, reading and preparation for teaching assignments;

IV.A.5.a).(2) must devote 50% (12-month equivalent) of their time to direct patient care activities. Direct patient care is defined as inpatient and outpatient care, clinical case conferences, and record reviews;

IV.A.5.a).(2).(a) must receive cross-training in internal medicine and pediatrics, and pediatric and adult allergy and immunology because specialists in allergy and immunology, whatever their primary specialties, are called on to diagnose and treat individuals of all ages;

IV.A.5.a).(2).(b) must have at least 20% of the required minimum twelve-month equivalent direct patient care activity in cross-training experience, including continuity of care in the inpatient and outpatient settings;

IV.A.5.a).(3) must provide continuing care of patients with asthma, allergic disorders, immunologic disorders, and immunodeficiency diseases;

- IV.A.5.a).(4) must enter these patients into the ACGME Resident Case Log System;
- IV.A.5.a).(5) must demonstrate the following allergy and immunology specific competencies to begin the independent practice of this specialty;
- IV.A.5.a).(6) must conduct comprehensive and detailed medical interviews with children and adults who present suspected allergic and/or immunologic disorders;
- IV.A.5.a).(7) must perform a physical examination appropriate to the specialty;
- IV.A.5.a).(8) must select, perform, and interpret diagnostic tests and studies;
- IV.A.5.a).(9) must assess the risks and benefits of allergic and immunologic disorder therapies (e.g., drug therapy, allergen immunotherapy, immunomodulatory therapy);
- IV.A.5.a).(10) must counsel and educate patients about diagnosis, prognosis, and treatment;
- IV.A.5.a).(11) must consult with and educate other physicians and health care providers;
- IV.A.5.a).(12) must apply basic and clinical science to the clinical care of patients;
- IV.A.5.a).(13) must coordinate the care of patients, including the use of consultation;
- IV.A.5.a).(14) must analyze medical and other scientific literature;
- IV.A.5.a).(15) must design, conduct, write, and present allergy and/or immunology research in either laboratory-based or clinical investigation.
- IV.A.5.a).(16) must have direct patient contact with children and adults with the following diagnoses:
- IV.A.5.a).(16).(a) anaphylaxis
- IV.A.5.a).(16).(b) asthma
- IV.A.5.a).(16).(c) atopic dermatitis
- IV.A.5.a).(16).(d) contact dermatitis
- IV.A.5.a).(16).(e) allergy to drugs and other biological agents

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| IV.A.5.a).(16).(f) | food allergy |
| IV.A.5.a).(16).(g) | primary and acquired immunodeficiency |
| IV.A.5.a).(16).(h) | ocular allergies |
| IV.A.5.a).(16).(i) | rhinitis |
| IV.A.5.a).(16).(j) | sinusitis |
| IV.A.5.a).(16).(k) | stinging insect allergy |
| IV.A.5.a).(16).(l) | urticaria and angioedema |
| IV.A.5.a).(17) | are strongly encouraged to have direct contact with, or case conference discussions concerning, patients with the following diagnoses: |
| IV.A.5.a).(17).(a) | autoimmune disease |
| IV.A.5.a).(17).(b) | allergic bronchopulmonary aspergillosis |
| IV.A.5.a).(17).(c) | eosinophilic disorders |
| IV.A.5.a).(17).(d) | hypersensitivity pneumonitis |
| IV.A.5.a).(17).(e) | vaccine reactions |
| IV.A.5.a).(17).(f) | mastocytosis |
| IV.A.5.a).(17).(g) | occupational lung disease |
| IV.A.5.a).(17).(h) | vasculitis |

IV.A.5.b)

Medical Knowledge

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

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| IV.A.5.b).(1) | must have a structured curriculum in pathophysiology, diagnosis, differential diagnosis, complications and treatment of the following diseases and circumstances: |
| IV.A.5.b).(1).(a) | anaphylaxis |
| IV.A.5.b).(1).(b) | asthma |
| IV.A.5.b).(1).(c) | atopic dermatitis |

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| IV.A.5.b).(1).(d) | contact dermatitis |
| IV.A.5.b).(1).(e) | drug allergy |
| IV.A.5.b).(1).(f) | food allergy |
| IV.A.5.b).(1).(g) | rhinitis and nasal polyps |
| IV.A.5.b).(1).(h) | sinusitis |
| IV.A.5.b).(1).(i) | stinging insect sensitivity |
| IV.A.5.b).(1).(j) | ocular allergy |
| IV.A.5.b).(1).(k) | acute and chronic urticaria/angioedema |
| IV.A.5.b).(1).(l) | hereditary and acquired angioedema |
| IV.A.5.b).(1).(m) | primary immunodeficiency |
| IV.A.5.b).(1).(m).(i) | humoral defects |
| IV.A.5.b).(1).(m).(ii) | cellular defects |
| IV.A.5.b).(1).(m).(iii) | phagocytic defects |
| IV.A.5.b).(1).(m).(iv) | complement defects |
| IV.A.5.b).(1).(m).(v) | other genetic defects |
| IV.A.5.b).(1).(n) | acquired immunodeficiency |
| IV.A.5.b).(1).(n).(i) | malignancy |
| IV.A.5.b).(1).(n).(ii) | infectious causes |
| IV.A.5.b).(1).(n).(iii) | nutritional/metabolic causes |
| IV.A.5.b).(1).(o) | autoimmune diseases |
| IV.A.5.b).(1).(p) | allergic bronchopulmonary aspergillosis |
| IV.A.5.b).(1).(q) | eosinophilic disorders |
| IV.A.5.b).(1).(r) | hypersensitivity pneumonitis |
| IV.A.5.b).(1).(s) | mastocytosis |
| IV.A.5.b).(1).(t) | occupational lung disease |

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| IV.A.5.b).(1).(u) | vasculitis |
| IV.A.5.b).(1).(v) | autoinflammatory disorders (e.g., Familial Mediterranean Fever, TRAPS, Hyper-IgD) |
| IV.A.5.b).(1).(w) | cystic fibrosis |
| IV.A.5.b).(1).(x) | allergens |
| IV.A.5.b).(1).(x).(i) | aerobiology, to include identification of relevant allergens |
| IV.A.5.b).(1).(x).(ii) | allergen measurement |
| IV.A.5.b).(1).(x).(iii) | environmental controls |
| IV.A.5.b).(1).(x).(iv) | allergen extracts |
| IV.A.5.b).(1).(x).(iv).(a) | preparation |
| IV.A.5.b).(1).(x).(iv).(b) | standardization |
| IV.A.5.b).(1).(x).(iv).(c) | prescription writing |
| IV.A.5.b).(1).(x).(iv).(d) | administration |
| IV.A.5.b).(1).(y) | pharmacology |
| IV.A.5.b).(1).(y).(i) | mechanisms of action |
| IV.A.5.b).(1).(y).(ii) | pharmacokinetics |
| IV.A.5.b).(1).(y).(iii) | drug development |
| IV.A.5.b).(1).(y).(iv) | drug metabolism |
| IV.A.5.b).(1).(y).(v) | drug interactions |
| IV.A.5.b).(1).(y).(vi) | drug side effects |
| IV.A.5.b).(1).(y).(vii) | preparation and use of monoclonal antibodies |
| IV.A.5.b).(1).(z) | diagnostic testing of allergic diseases |
| IV.A.5.b).(1).(z).(i) | sensitivity and specificity |
| IV.A.5.b).(1).(z).(ii) | cost |
| IV.A.5.b).(1).(z).(iii) | immediate hypersensitivity skin testing |

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| IV.A.5.b).(1).(z).(iv) | patch testing |
| IV.A.5.b).(1).(z).(v) | in vitro testing |
| IV.A.5.b).(1).(z).(vi) | specialty laboratory testing |
| IV.A.5.b).(1).(z).(vii) | special types of skin testing (e.g., physical urticaria, autologous skin tests) |
| IV.A.5.b).(1).(z).(viii) | nasal cytology |
| IV.A.5.b).(1).(z).(ix) | rhinoscopy |
| IV.A.5.b).(1).(z).(x) | skin biopsies |
| IV.A.5.b).(1).(z).(xi) | food challenge testing |
| IV.A.5.b).(1).(aa) | other necessary components of the curriculum |
| IV.A.5.b).(1).(aa).(i) | pulmonary physiology and testing |
| IV.A.5.b).(1).(aa).(ii) | pulmonary function testing, including methods and reliability |
| IV.A.5.b).(1).(aa).(iii) | provocation challenges for bronchial reactivity |
| IV.A.5.b).(1).(bb) | diagnostic testing of clinical immunology diseases that include: |
| IV.A.5.b).(1).(bb).(i) | principles and techniques of clinical immunology laboratory procedures |
| IV.A.5.b).(1).(bb).(ii) | tests for humoral immunity |
| IV.A.5.b).(1).(bb).(iii) | tests for cellular immunity |
| IV.A.5.b).(1).(bb).(iv) | neutrophil function |
| IV.A.5.b).(1).(bb).(v) | cytokines |
| IV.A.5.b).(1).(bb).(vi) | immune complexes |
| IV.A.5.b).(1).(bb).(vii) | cryoprecipitable proteins |
| IV.A.5.b).(1).(bb).(viii) | total serum complement activity and individual components |
| IV.A.5.b).(1).(bb).(ix) | histocompatibility |
| IV.A.5.b).(1).(bb).(x) | tests for acquired immunodeficiencies |

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| IV.A.5.b).(1).(bb).(xi) | tests for autoimmunity and vasculitis |
| IV.A.5.b).(1).(bb).(xii) | preparation and use of monoclonal antibodies |
| IV.A.5.b).(1).(cc) | intravenous immunoglobulins |
| IV.A.5.b).(1).(cc).(i) | mechanism of action |
| IV.A.5.b).(1).(cc).(ii) | pharmacological properties |
| IV.A.5.b).(1).(cc).(iii) | administration |
| IV.A.5.b).(1).(cc).(iv) | development |
| IV.A.5.b).(1).(cc).(v) | contraindications and side effects |
| IV.A.5.b).(1).(cc).(vi) | cost |
| IV.A.5.b).(1).(dd) | vaccines and immunotherapies |
| IV.A.5.b).(1).(dd).(i) | mechanism of action |
| IV.A.5.b).(1).(dd).(ii) | administration |
| IV.A.5.b).(1).(dd).(iii) | development |
| IV.A.5.b).(1).(dd).(iv) | contraindications and side effects |
| IV.A.5.b).(1).(dd).(v) | tests for vaccine response |
| IV.A.5.b).(1).(dd).(vi) | use in immunodeficiencies |
| IV.A.5.b).(1).(ee) | other immunology |
| IV.A.5.b).(1).(ee).(i) | transplantation |
| IV.A.5.b).(1).(ee).(ii) | gastrointestinal |
| IV.A.5.b).(1).(ee).(iii) | skin |
| IV.A.5.b).(1).(ee).(iv) | reproductive |
| IV.A.5.b).(1).(ee).(v) | endocrine |
| IV.A.5.b).(1).(ee).(vi) | tumor |
| IV.A.5.b).(1).(ee).(vii) | molecular/immunobiology |
| IV.A.5.b).(1).(ff) | diagnostic imaging |

| | |
|--------------------|--|
| IV.A.5.b).(1).(gg) | mechanisms of inflammation |
| IV.A.5.b).(1).(hh) | knowledge of controversial or unproven drug or therapeutic techniques in allergy asthma allergic disorders, immunologic disorders, and immunodeficiency diseases |
| IV.A.5.b).(1).(ii) | ethics |
| IV.A.5.b).(1).(jj) | psychological effects of chronic illness |
| IV.A.5.b).(1).(kk) | practice management insurance, coding, billing, patient satisfaction, malpractice, healthcare politics |
| IV.A.5.b).(1).(ll) | costs of therapy and diagnostic testing |

IV.A.5.c)

Practice-based Learning and Improvement

Residents must demonstrate the ability to investigate and evaluate their care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and life-long learning. Residents are expected to develop skills and habits to be able to meet the following goals:

| | |
|----------------------|--|
| IV.A.5.c).(1) | identify strengths, deficiencies, and limits in one's knowledge and expertise; |
| IV.A.5.c).(2) | set learning and improvement goals; |
| IV.A.5.c).(3) | identify and perform appropriate learning activities; |
| IV.A.5.c).(4) | systematically analyze practice using quality improvement methods, and implement changes with the goal of practice improvement; |
| IV.A.5.c).(5) | incorporate formative evaluation feedback into daily practice; |
| IV.A.5.c).(6) | locate, appraise, and assimilate evidence from scientific studies related to their patients' health problems; |
| IV.A.5.c).(7) | use information technology to optimize learning; and, |
| IV.A.5.c).(8) | participate in the education of patients, families, students, residents and other health professionals. |
| IV.A.5.c).(9) | conduct a comprehensive literature search; |

- IV.A.5.c).(10) design, write, review, or edit research protocols or plans;
- IV.A.5.c).(11) attain a working knowledge of research design, statistics, clinical trials, epidemiology, and laboratory research;
- IV.A.5.c).(12) acquire a working knowledge of research ethics and principles of confidentiality;
- IV.A.5.c).(13) apply the principles of data collection, data analysis, and data interpretation;
- IV.A.5.c).(14) have appropriate supervision for their research activity; and,
- IV.A.5.c).(15) communicate research findings orally and in writing.

IV.A.5.d)

Interpersonal and Communication Skills

Residents must demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals. Residents are expected to:

- IV.A.5.d).(1) communicate effectively with patients, families, and the public, as appropriate, across a broad range of socioeconomic and cultural backgrounds;**
- IV.A.5.d).(2) communicate effectively with physicians, other health professionals, and health related agencies;**
- IV.A.5.d).(3) work effectively as a member or leader of a health care team or other professional group;**
- IV.A.5.d).(4) act in a consultative role to other physicians and health professionals; and,**
- IV.A.5.d).(5) maintain comprehensive, timely, and legible medical records, if applicable.**

IV.A.5.e)

Professionalism

Residents must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles. Residents are expected to demonstrate:

- IV.A.5.e).(1) compassion, integrity, and respect for others;**
- IV.A.5.e).(2) responsiveness to patient needs that supersedes self-interest;**
- IV.A.5.e).(3) respect for patient privacy and autonomy;**

IV.A.5.e).(4) accountability to patients, society and the profession;
and,

IV.A.5.e).(5) sensitivity and responsiveness to a diverse patient population, including but not limited to diversity in gender, age, culture, race, religion, disabilities, and sexual orientation.

IV.A.5.f) Systems-based Practice

Residents must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care. Residents are expected to:

IV.A.5.f).(1) work effectively in various health care delivery settings and systems relevant to their clinical specialty;

IV.A.5.f).(2) coordinate patient care within the health care system relevant to their clinical specialty;

IV.A.5.f).(3) incorporate considerations of cost awareness and risk-benefit analysis in patient and/or population-based care as appropriate;

IV.A.5.f).(4) advocate for quality patient care and optimal patient care systems;

IV.A.5.f).(5) work in interprofessional teams to enhance patient safety and improve patient care quality; and,

IV.A.5.f).(6) participate in identifying system errors and implementing potential systems solutions.

IV.B. Residents' Scholarly Activities

IV.B.1. The curriculum must advance residents' knowledge of the basic principles of research, including how research is conducted, evaluated, explained to patients, and applied to patient care.

IV.B.2. Residents should participate in scholarly activity.

IV.B.2.a) 25% of the program must be devoted to research and scholarly activities.

IV.B.2.b) The program must provide residents with a structured research experience sufficient to result in an understanding of the basic principles of study design, performance, analysis, and reporting.

IV.B.3. The sponsoring institution and program should allocate adequate educational resources to facilitate resident involvement in scholarly activities.

IV.B.4. Other Educational Activities

IV.B.4.a) 25% of the program must be devoted to other educational activities.

IV.B.4.b) The “other” category is designed to encourage innovative educational experiences for residents within the program.

IV.B.4.c) Examples of “other” include, but are not limited to, the following:

IV.B.4.c).(1) residents attendance at conferences and meetings, including national meetings;

IV.B.4.c).(2) educationally valuable committee work within the hospital or with other health organizations;

IV.B.4.c).(3) educationally valuable time devoted to hospital administrative requirements; and,

IV.B.4.c).(4) time spent fulfilling requirements such as Basic Life Support.

V. Evaluation

V.A. Resident Evaluation

V.A.1. Formative Evaluation

V.A.1.a) The faculty must evaluate resident performance in a timely manner during each rotation or similar educational assignment, and document this evaluation at completion of the assignment.

V.A.1.b) The program must:

V.A.1.b).(1) provide objective assessments of competence in patient care, medical knowledge, practice-based learning and improvement, interpersonal and communication skills, professionalism, and systems-based practice;

V.A.1.b).(2) use multiple evaluators (e.g., faculty, peers, patients, self, and other professional staff);

V.A.1.b).(3) document progressive resident performance improvement appropriate to educational level; and,

- V.A.1.b).(4)** provide each resident with documented semiannual evaluation of performance with feedback.
- V.A.1.b).(5)** use structured checklists and evaluation forms, as encouraged by the Review Committee. The direct observation of resident interactions with patients should be included. Innovation in resident evaluation is encouraged.
- V.A.1.c)** The evaluations of resident performance must be accessible for review by the resident, in accordance with institutional policy.
- V.A.2. Summative Evaluation**
- V.A.2.a)** The program director must provide a summative evaluation for each resident upon completion of the program. This evaluation must become part of the resident's permanent record maintained by the institution, and must be accessible for review by the resident in accordance with institutional policy. This evaluation must:
- V.A.2.b)** document the resident's performance during the final period of education, and
- V.A.2.c)** verify that the resident has demonstrated sufficient competence to enter practice without direct supervision.
- V.B. Faculty Evaluation**
- V.B.1.** At least annually, the program must evaluate faculty performance as it relates to the educational program.
- V.B.2.** These evaluations should include a review of the faculty's clinical teaching abilities, commitment to the educational program, clinical knowledge, professionalism, and scholarly activities.
- V.B.3.** This evaluation must include at least annual written confidential evaluations by the residents.
- V.C. Program Evaluation and Improvement**
- V.C.1.** The program must document formal, systematic evaluation of the curriculum at least annually. The program must monitor and track each of the following areas:
- V.C.1.a)** resident performance;
- V.C.1.b)** faculty development;
- V.C.1.c)** graduate performance, including performance of program

graduates on the certification examination; and,

V.C.1.d) program quality. Specifically:

V.C.1.d).(1) Residents and faculty must have the opportunity to evaluate the program confidentially and in writing at least annually, and

V.C.1.d).(2) The program must use the results of residents' assessments of the program together with other program evaluation results to improve the program.

V.C.2. If deficiencies are found, the program should prepare a written plan of action to document initiatives to improve performance in the areas listed in section V.C.1. The action plan should be reviewed and approved by the teaching faculty and documented in meeting minutes.

VI. Resident Duty Hours in the Learning and Working Environment

VI.A. Professionalism, Personal Responsibility, and Patient Safety

VI.A.1. Programs and sponsoring institutions must educate residents and faculty members concerning the professional responsibilities of physicians to appear for duty appropriately rested and fit to provide the services required by their patients.

VI.A.2. The program must be committed to and responsible for promoting patient safety and resident well-being in a supportive educational environment.

VI.A.3. The program director must ensure that residents are integrated and actively participate in interdisciplinary clinical quality improvement and patient safety programs.

VI.A.4. The learning objectives of the program must:

VI.A.4.a) be accomplished through an appropriate blend of supervised patient care responsibilities, clinical teaching, and didactic educational events; and,

VI.A.4.b) not be compromised by excessive reliance on residents to fulfill non-physician service obligations.

VI.A.5. The program director and institution must ensure a culture of professionalism that supports patient safety and personal responsibility. Residents and faculty members must demonstrate an understanding and acceptance of their personal role in the following:

VI.A.5.a) assurance of the safety and welfare of patients entrusted to

- their care;
 - VI.A.5.b) provision of patient- and family-centered care;
 - VI.A.5.c) assurance of their fitness for duty;
 - VI.A.5.d) management of their time before, during, and after clinical assignments;
 - VI.A.5.e) recognition of impairment, including illness and fatigue, in themselves and in their peers;
 - VI.A.5.f) attention to lifelong learning;
 - VI.A.5.g) the monitoring of their patient care performance improvement indicators; and,
 - VI.A.5.h) honest and accurate reporting of duty hours, patient outcomes, and clinical experience data.
- VI.A.6. All residents and faculty members must demonstrate responsiveness to patient needs that supersedes self-interest. Physicians must recognize that under certain circumstances, the best interests of the patient may be served by transitioning that patient's care to another qualified and rested provider.
- VI.B. Transitions of Care
- VI.B.1. Programs must design clinical assignments to minimize the number of transitions in patient care.
 - VI.B.2. Sponsoring institutions and programs must ensure and monitor effective, structured hand-over processes to facilitate both continuity of care and patient safety.
 - VI.B.3. Programs must ensure that residents are competent in communicating with team members in the hand-over process.
 - VI.B.4. The sponsoring institution must ensure the availability of schedules that inform all members of the health care team of attending physicians and residents currently responsible for each patient's care.
- VI.C. Alertness Management/Fatigue Mitigation
- VI.C.1. The program must:
 - VI.C.1.a) educate all faculty members and residents to recognize the signs of fatigue and sleep deprivation;
 - VI.C.1.b) educate all faculty members and residents in alertness

- management and fatigue mitigation processes; and,
- VI.C.1.c) adopt fatigue mitigation processes to manage the potential negative effects of fatigue on patient care and learning, such as naps or back-up call schedules.
- VI.C.2. Each program must have a process to ensure continuity of patient care in the event that a resident may be unable to perform his/her patient care duties.
- VI.C.3. The sponsoring institution must provide adequate sleep facilities and/or safe transportation options for residents who may be too fatigued to safely return home.
- VI.D. **Supervision of Residents**
- VI.D.1. In the clinical learning environment, each patient must have an identifiable, appropriately-credentialed and privileged attending physician (or licensed independent practitioner as approved by each Review Committee) who is ultimately responsible for that patient's care.
- VI.D.1.a) This information should be available to residents, faculty members, and patients.
- VI.D.1.b) Residents and faculty members should inform patients of their respective roles in each patient's care.
- VI.D.2. The program must demonstrate that the appropriate level of supervision is in place for all residents who care for patients.
- Supervision may be exercised through a variety of methods. Some activities require the physical presence of the supervising faculty member. For many aspects of patient care, the supervising physician may be a more advanced resident or fellow. Other portions of care provided by the resident can be adequately supervised by the immediate availability of the supervising faculty member or resident physician, either in the institution, or by means of telephonic and/or electronic modalities. In some circumstances, supervision may include post-hoc review of resident-delivered care with feedback as to the appropriateness of that care.
- VI.D.3. **Levels of Supervision**
- To ensure oversight of resident supervision and graded authority and responsibility, the program must use the following classification of supervision:
- VI.D.3.a) **Direct Supervision** – the supervising physician is physically present with the resident and patient.

- VI.D.3.b) Indirect Supervision:**
- VI.D.3.b).(1)** with direct supervision immediately available – the supervising physician is physically within the hospital or other site of patient care, and is immediately available to provide Direct Supervision.
- VI.D.3.b).(2)** 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.
- VI.D.3.c)** Oversight – the supervising physician is available to provide review of procedures/encounters with feedback provided after care is delivered.
- VI.D.4.** The privilege of progressive authority and responsibility, conditional independence, and a supervisory role in patient care delegated to each resident must be assigned by the program director and faculty members.
- VI.D.4.a)** The program director must evaluate each resident’s abilities based on specific criteria. When available, evaluation should be guided by specific national standards-based criteria.
- VI.D.4.b)** Faculty members functioning as supervising physicians should delegate portions of care to residents, based on the needs of the patient and the skills of the residents.
- VI.D.4.c)** Senior residents or fellows should serve in a supervisory role of junior residents in recognition of their progress toward independence, based on the needs of each patient and the skills of the individual resident or fellow.
- VI.D.5.** Programs must set guidelines for circumstances and events in which residents must communicate with appropriate supervising faculty members, such as the transfer of a patient to an intensive care unit, or end-of-life decisions.
- VI.D.5.a)** Each resident must know the limits of his/her scope of authority, and the circumstances under which he/she is permitted to act with conditional independence.
- VI.D.5.a).(1)** In particular, PGY-1 residents should be supervised either directly or indirectly with direct supervision immediately available.
- VI.D.6.** Faculty supervision assignments should be of sufficient duration to assess the knowledge and skills of each resident and delegate to

him/her the appropriate level of patient care authority and responsibility.

VI.E. Clinical Responsibilities

The clinical responsibilities for each resident must be based on PGY-level, patient safety, resident education, severity and complexity of patient illness/condition and available support services.

VI.F. Teamwork

Residents must care for patients in an environment that maximizes effective communication. This must include the opportunity to work as a member of effective interprofessional teams that are appropriate to the delivery of care in the specialty.

VI.G. Resident Duty Hours

VI.G.1. Maximum Hours 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.

VI.G.1.a) Duty Hour Exceptions

A Review Committee may grant exceptions for up to 10% or a maximum of 88 hours to individual programs based on a sound educational rationale.

The Review Committee for Allergy and Immunology will not consider requests for exceptions to the 80-hour limit to the residents' work week.

VI.G.1.a).(1) In preparing a request for an exception the program director must follow the duty hour exception policy from the ACGME Manual on Policies and Procedures.

VI.G.1.a).(2) Prior to submitting the request to the Review Committee, the program director must obtain approval of the institution's GMEC and DIO.

VI.G.2. Moonlighting

VI.G.2.a) Moonlighting must not interfere with the ability of the resident to achieve the goals and objectives of the educational program.

VI.G.2.b) Time spent by residents in Internal and External Moonlighting (as defined in the ACGME Glossary of Terms) must be counted towards the 80-hour Maximum Weekly Hour Limit.

- VI.G.2.c) PGY-1 residents are not permitted to moonlight.**
- VI.G.3. 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.**
- VI.G.4. Maximum Duty Period Length**
- VI.G.4.a) Duty periods of PGY-1 residents must not exceed 16 hours in duration.**
- VI.G.4.b) 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.**
- VI.G.4.b).(1) 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.**
- VI.G.4.b).(2) Residents must not be assigned additional clinical responsibilities after 24 hours of continuous in-house duty.**
- VI.G.4.b).(3) 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.**
- VI.G.4.b).(3).(a) Under those circumstances, the resident must:**
- VI.G.4.b).(3).(a).(i) appropriately hand over the care of all other patients to the team responsible for their continuing care; and,**
- VI.G.4.b).(3).(a).(ii) document the reasons for remaining to care for the patient in question and submit that documentation in every circumstance to the program director.**

VI.G.4.b).(3).(b)

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

VI.G.5.

Minimum Time Off between Scheduled Duty Periods

VI.G.5.a)

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

VI.G.5.b)

Intermediate-level residents 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.

First year allergy and immunology residents should be able to function as residents in the final years of education. However, some may come to residency with a specialized education and may only be at the PGY-2 or PGY-3 level. These residents should be monitored as “intermediate” residents for one year.

VI.G.5.c)

Residents in the final years of education must be prepared to enter the unsupervised practice of medicine and care for patients over irregular or extended periods.

VI.G.5.c).(1)

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 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.

VI.G.5.c).(1).(a)

Circumstances of 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.

VI.G.5.c).(1).(b)

The Review Committee defines such circumstances as: required continuity of care for a severely ill or unstable patient, or a complex patient with whom the resident has been involved; events of exceptional educational value; or, humanistic attention to the needs of a patient or family.

VI.G.6.

Maximum Frequency of In-House Night Float

Residents must not be scheduled for more than six consecutive

nights of night float.

VI.G.7. 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).

VI.G.8. At-Home Call

VI.G.8.a) Time spent in the hospital by residents on at-home call must count towards the 80-hour 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 one-day-in-seven free of duty, when averaged over four weeks.

VI.G.8.a).(1) At-home call must not be so frequent or taxing as to preclude rest or reasonable personal time for each resident.

VI.G.8.b) 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”.

VII. Innovative Projects

Requests for innovative projects that may deviate from the institutional, common and/or specialty specific program requirements must be approved in advance by the Review Committee. In preparing requests, the program director must follow Procedures for Approving Proposals for Innovative Projects located in the ACGME Manual on Policies and Procedures. Once a Review Committee approves a project, the sponsoring institution and program are jointly responsible for the quality of education offered to residents for the duration of such a project.

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